Health INEQUALITIES in Slovenia

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Foreword by the Minister of Health

Slovenia is facing rapid changes and development challenges in all areas that are important for societal progress and prosperity. The Slovenian population ranks health – an important element of quality of life and welfare – at the very top of the scale of values, while health also represents an important social capital, which is a prerequisite for social and economic development. The health of an individual is determined largely by the social and economic conditions, in which we are born, grow up, work, and age.

Life expectancy and selected health indicators show that the health of the entire population has significantly improved in recent decades. However, we can observe that the health of groups with higher socioeconomic status improves faster and that individuals from different socioeconomic groups achieve their health potential to different degrees. Determinants (such as education, employment, income, social security and social networks) affect lifestyle, risk factors, use of health services, as well as other services. These determinants consequently cause differences in morbidity, mortality and life expectancy.

It is very important to monitor health and quality of life of the Slovenian population and to compare the results with other countries; however, it is even more important to monitor health of different socioeconomic groups within the country, to detect existing health inequalities, and try to prevent and reduce them.

Health system and the Ministry of Health can significantly contribute to reducing health inequalities by securing equal access and utilization of health services. This includes preventive and other public health programmes. The effect is much greater if other line ministries, that have a more significant impact on socioeconomic determinants, also understand their role in reducing disparities in health and act upon them. Relevant universal policies in education, social welfare, child and family development, active employment, and tax legislation are the basis for reducing health inequalities, which – in connection with special support measures for vulnerable groups – can ensure the desired outcomes. The key to success in tackling health inequalities is joint action of different sectors and stakeholders at all levels of society and the understanding of how their investments and decisions affect health.

This publication is a great contribution towards revealing and understanding health inequalities in Slovenia. It is an excellent starting point for further discussion on the vision of Slovenia's future development and how to ensure the best health outcomes for individuals from all socioeconomic groups.

Dorijan Marušič
Minister of Health

Foreword by the Minister of Labour, Family and Social Affairs

Issues of social inequalities, poverty trends and social exclusion – as well as social justice or what we perceive as being socially just – have been frequently exposed in recent years. The economic crisis has led to the increase in the number of unemployed as a result of company bankruptcies and halted new employment; the increase in the number of individuals and families who are eligible for social assistance; and the increase in the number of those seeking help from nongovernmental organizations (NGOs). These recent social consequences which are a result of the economic crisis have coincided with the European Year for Combating Poverty and Social Exclusion (2010). The main purpose of this European initiative was not only to stimulate debate and raise public awareness on various aspects of poverty and social exclusion, along with possible solutions, but also to encourage a renewed commitment of all partners (including NGOs, social partners and others, alongside the government) to fight against various forms of poverty and social exclusion. This struggle does not only mean providing basic measures to ensure minimum living standards for all individuals and families who find themselves in distress (that is, providing minimum income/social transfers when individuals or families are unable to provide for themselves). It also means providing measures for promoting economic and social integration of individuals (especially the employment integration of individuals who are employable) and measures to ensure equal access to different services (social, health and other essential services of general interest), regardless of the economic or material situation of individuals.

Furthermore, it seems very important to pay more attention to issues that are crucial to tackling poverty and social inequalities, yet are often overlooked. One such subject is the continuing deprivation and/or exclusion of groups most vulnerable to poverty, and the question of which mechanisms to use to effectively overcome this reproduction. Another very important issue, related to the theme of this publication; namely, by what measures and mechanisms can we reduce the impact of inequalities in social position on the health of individuals.

In connection to the European strategy (Europe 2020) and the national reform programme adopted on this basis, Slovenia has committed to reduce the number of people who have a high risk of poverty and social exclusion by 2020, as part of one of the five key development objectives. In this regard, the Ministry of Labour, Family and Social Affairs has already adopted a series of measures. To tackle poverty, deprivation and social exclusion effectively, we need more coordination and cooperation between various line ministries, especially between social and health departments, as well as housing.

I welcome this publication with great enthusiasm, since it does not only addresses in my opinion an emerging topic, but also represents the result of good cooperation between different institutions, which we wish to support and encourage in the future.

dr. Ivan Svetlik
Minister of Labour, Family and Social Affairs

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A note from the editors

This report on health inequalities in Slovenia represents a significant advance in this field. The National Institute of Public Health (NIPH), the Statistical Office of the Republic of Slovenia (SORS), the Institute of Macroeconomic Analysis and Development (IMAD), the Institute of Oncology Ljubljana, the Centre for Health and Development Murska Sobota[1] and the World Health Organization (WHO) Regional Office for Europe were all involved in its preparation. The Ministry of Health and WHO made this publication possible as part of the activities agreed upon within the Biennial Collaborative Agreement 2010–2011 between WHO and the Republic of Slovenia. With this report, we wish to provide an insight into health inequalities in Slovenia, for the political, professional, and non-professional public, on the basis of currently available data. The primary purpose is to encourage discussion that will allow the creation of a vision, a development strategy, a framework for decreasing inequalities as well as one or more action plans to deal with health inequalities in Slovenia.

Health inequalities between and within countries are significant and are increasing in many places. The risk that a woman might die during pregnancy or childbirth is 1:17 400 in Sweden, and only 1:8 in Afghanistan. A girl born in Lesotho is likely to live 42 years than a girl born in Japan. A boy born in a poor part of Glasgow can expect a life span shorter by 28 years than that of one born in the wealthy part of town.[2] Social justice is therefore a matter of life and death. Health inequalities are present in all countries, as much in developing countries as in developed ones, including in Slovenia. In 2003, the IMAD created the Report on human development 2003. It presented a picture of health within the context of social development in Slovenia. The detailed analysis of the facts and phenomena that were included in the report – and were a reflection of the situation in that particular temporal and spatial context – were the incentive for further research of health inequalities by different professions. At that time, links between different databases were already being established, while efforts for a joint information system were also under way. Unfortunately, work in this direction did not continue; the monitoring of socioeconomic determinants of health has not become routine in Slovenia and does not feature in periodic reports. However, the need for such monitoring is growing, further encouraged by activities on the subject of socioeconomic determinants of health and health inequalities that have taken place in recent years. On 28–29 May 2009, in collaboration with WHO, a European and national workshop was held on cross-sectoral investments in health and health equity. In April 2009 a workshop of the NIPH was held, entitled Ensuring greater equity in health – challenges of the recession for public health and the promotion of health in Slovenia and in January 2010 another workshop of the NIPH was held on inequalities in the promotion of health. These workshops exposed the need for the systematic monitoring of health status in relation to social determinants, as well as the need for continuous work and

1 WHO Collaborating Centre for Capacity Building in Cross-Sectoral Investment for Health.
2 WHO (2008). Closing the gap in a generation. Commission on social determinants of health. Final report. Geneva, World Health Organization.

better cooperation between all stakeholders in this field. The National report of the Ministry of Labour, Family and Social Affairs in 2008 cites, among other items, the need for greater social inclusion of individuals and greater social cohesion as one of the key challenges in the field of social protection and social inclusion. The findings of the WHO Rapid Appraisal Mission on Social Determinants of Health (November 2009) highlight a number of areas in which Slovenia has in the past made significant strides and achieved tangible successes, while at the same time bring to light opportunities for further improvement. Finally, social changes, globalization and economic crisis pose new challenges for our society. Economic growth cannot be the only measure of a society's development.

All this has led to this report, the main purpose of which is to raise awareness among decision-makers for the need to make the health of the population one of the priorities of development and an integral part of all policies in Slovenia. At the same time, we want to encourage the re-establishment of continuous cooperation between the various institutions (for example, NIPH, SORS, IMAD, universities, Health Insurance Institute of Slovenia (HIIS)), if we want the monitoring of socioeconomic determinants of health to become standard and as such provide a basis for the preparation of similar periodic reports.

This publication is somewhat limited to selected snapshots of the health status of the Slovenian population in relation to socioeconomic determinants, as we were confronted with suboptimal availability of data. While some data do exist, so far these have been largely collected and analysed unsystematically and in individual areas. Therefore, the content framework of this publication is linked to the currently available data on inequalities and as such is mainly limited to the period 2004–2008 (see Annex 1 Methodology).

This publication is divided in four large sections. The first introductory chapter briefly outlines what affects health, with emphasis on socioeconomic determinants.

The focus of the second chapter is on the presentation of health inequalities in Slovenia. Here we have tried to cover all periods of life, from developing in the womb and early childhood to old age. We have tried to show different health outcomes, such as morbidity, mortality, lifestyle, risk factors, and the use of health services in the light of certain socioeconomic determinants, such as income status, employment/unemployment, education, and development of geographic areas. In doing so, we used both routine statistical and survey data, as well as data from selected research projects.

The third chapter presents some of the policies and approaches that in practice have proven effective for reducing social inequalities in health. Some policies and approaches for reducing health inequalities are presented first, followed by four examples of good practice.

We conclude the publication with the key challenges that Slovenian society will have to face in the future if it is to successfully manage inequalities in health.

Inequalities must be made visible and understandable. This report is one of the important steps in that direction. On this basis, we can develop a strategic framework of (co)operation, which will follow the latest evidence and will represent a foundation from which health inequalities can be comprehensively tackled.

Only together can we establish a friendlier and thus better world in which we are born, grow up, live, work, create and age.

Summary

Socioeconomic health inequalities are systematic differences in the health outcomes between social groups, which can be prevented and are thus unjust. A comprehensive knowledge of health inequalities – in particular what they are and what causes them – is essential in order to effectively reduce them. This report presents selected health indicators in relation to social determinants. The primary purpose of this report is to encourage debate that will seek answers to key challenges in the field of health inequalities in Slovenia. As the field of social determinants of health is broader than the area of work covered by the NIPH, preparation of the report involved SORS, IMAD, the Institute of Oncology Ljubljana, the Centre for Health and Development Murska Sobota and the WHO Regional Office for Europe.

The report presents inequalities in health between different groups within the population of Slovenia, and identifies some of the comparisons between Slovenia and other European Union (EU) countries.

Comparison with other countries shows in particular the following points.

- The age-standardized mortality rate in Slovenia was 680 per 100 000 inhabitants (which is somewhat lower than the EU average). This masks the fact, however, that in Slovenia there is a significant difference between the populations of municipalities with the highest and lowest income per capita (measured as income tax base per capita).

- Slovenia ranks among the countries with the lowest infant mortality rates in the EU, yet the mortality rate of infants born to mothers with maximum primary school education is 2.6 times higher than that of infants born to mothers that have tertiary education.

- According to injury-related mortality figures, Slovenia ranks in the middle third among EU countries, yet still with a significant difference between the municipalities with the highest and lowest income per capita (measured as income tax base per capita). Injuries are a significant cause of premature mortality in Slovenia.

Analyses have shown that in Slovenia socioeconomic conditions significantly affect the lifestyle of the population.

- Children in poorer families consume less fruit and vegetables and are less often physically active.

- The percentage of overweight and obese adults is greater among the population with a low socioeconomic status.

- The percentage of smokers for both men and women is higher in the population group with vocational or primary education.

There are significant differences in morbidity between the different socioeconomic population groups in Slovenia.

- The frequency of arterial hypertension and heart disease in the age group 45–64 years is most prevalent in the population group with the lowest educational level.

- In the economically deprived north-eastern part of Slovenia there is a higher risk of head and neck cancer for men than in the more developed central and western parts of the country. Inversely, the risk of malign melanoma and breast cancer is higher for women in the economically privileged areas of central and western Slovenia.

- Depression and musculoskeletal problems are less common with the more educated population of Slovenia.

Differences in health between the different population groups also affect life expectancy and mortality.

- A 30 year-old man with higher education can expect to live 7.3 years longer than a man with a lower level of education, and 4.3 years less than a 30-year-old woman with higher education, and even 1.8 years less than a woman with a lower level of education.

- The population mortality rate in the group of municipalities with a lower income per capita is significantly higher than in the group of municipalities with a higher income per capita. The gap in mortality in men is greater than that for women. Similarly, this holds true for premature mortality in both genders due to liver cirrhosis, and for suicide and traffic injury-related mortality in men.

The pattern and magnitude of health inequalities in Slovenia are similar to those found in other EU countries. Significant improvements in the population health outcomes can be achieved if we improve the wider social, economic, and physical environment in which people live. In practice, Slovenia implements a number of universal policies (for example, in the fields of social security, education, health, taxation policy, and so on) that represent a key foundation for preventing and reducing health inequalities.

Various policies and approaches are available that have already proven effective in reducing social inequalities in health. Effective method is the combined use of the

population approach, reducing the gap between the weakest and the most privileged socioeconomic group or the average, and target interventions for the most vulnerable groups. The programme MURA is an example of action tackling cross-regional health inequalities.

In the future, Slovenia will have to tackle selected challenges in the field of health inequalities. The fact is that the country needs a new vision of development in which the reduction of health inequalities must be one of the major priorities. To effectively reduce health inequalities, a country needs a strategic national framework that will establish coordinated objectives and priorities for different sectors at national and local levels. It is important that individual sectors at different levels recognize the benefits that ensue from the process of reducing health inequalities, which would contribute to better sectoral and cross-sectoral policies. A prerequisite for planning and acting on health inequalities is the systematic monitoring of the status and trends as a basis for developing further measures, as well as evaluating the achievements. The availability of data at the individual level, along with links between socioeconomic and health data and the development of new sources of data are prerequisites for the systematic monitoring, analysing, and evaluating health inequalities and the relevant policies. In the future, it is necessary to strengthen, upgrade and formalize the cooperation between institutions.

As part of the global world, Slovenia is confronted with global challenges in the field of health, affected, among others, by economic development and crisis, climate change and political challenges. All these affect migration flows. One of the future challenges will be Slovenia's response to migration flows (taking into account an ageing population), which can potentially contribute to escalating health inequalities. As health inequalities are a joint problem of all EU countries, one of the challenges is the active participation of Slovenia in international processes for tackling inequalities.

Key concepts in this report

Health equality means that, ideally, everyone could attain their full health potential and that no one should be disadvantaged from achieving this potential because of their social position or other socially determined factors (Dahlgren & Whitehead, 2006).

Health inequalities, as dealt with in this publication, refer to socioeconomic inequalities in health. These are systematic differences in health or health outcomes between social groups with different socioeconomic status which we can prevent and are thus unjust (Dahlgren & Whitehead, 2006).

Gender differences in health. These are economically, socially or culturally determined systematic differences in health between men and women – in contrast to biological differences between the sexes. Social inequalities in health should, whenever possible, be described and analysed separately for men and for women, as both the magnitude and causes of observed differences may vary between the two sexes (Dahlgren & Whitehead, 2006).

Geographic differences in health. These are differences in health observed between different geographical areas. Geographical differences in health should, whenever possible, be described and analysed in terms of the age and socioeconomic structure of the areas compared. The observed health status in areas with a homogenous social structure can be used – with due consideration to differences in age structure – as a proxy for assessing social inequalities in health when information about the health status of different socioeconomic groups does not exist or is very limited (Dahlgren & Whitehead, 2006).

Equality in health care. This incorporates notions of fair arrangements that allow equal geographic, economic and cultural access to available services for all in equal need of care (Dahlgren & Whitehead, 2006).

Determinants of health are factors or a combination of factors that affect health positively or negatively. This report focuses on social, economic and lifestyle-related determinants of health – that is, factors that can be influenced by political, commercial and individual decisions – as opposed to age, sex and genetic factors.

Protective factors. These are factors that eliminate the risk of, or facilitate resistance to disease. The classical example is immunization against a variety of infectious diseases. Healthy diets, such as the Mediterranean diet (high consumption of fruit and olive oil) and non-smoking are also considered to be protective. Psychosocial factors, such as social support, a sense of purpose, direction and control in life, good family relationships and other emotionally rewarding social relationships, economic security, adequate housing and food security are also increasingly recognized as factors that protect health (WHO, 2002; Wilkinson, 2005).

Risk factors or risk conditions increase the likelihood or risk of health problems and diseases occurring that can be prevented. They can be socioeconomic factors, or may be associated with specific environmental risks (for example, air pollution) or lifestyle-related hazards (for example, smoking).

The social gradient of health refers to health outcomes relative to socioeconomic status. The gradient shows that health inequalities are not just an issue of a gap in health between the most affluent and the poorest population groups, but takes in the whole population (Fig. 1).

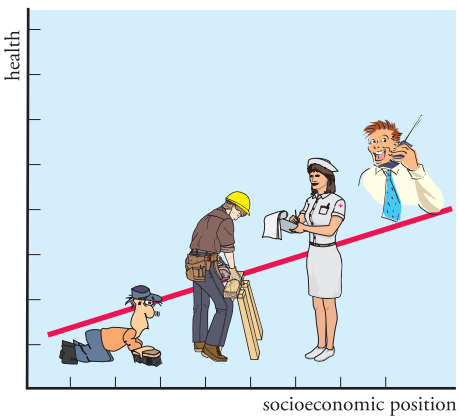

Fig. 1. Social gradient of health

Socioeconomic status is the relative position of a family or individual on the hierarchical social scale, and is relative to access to and control over property, prestige and power.

Health in all policies points out that better health and reducing health inequalities must be a common objective of all sectors at various levels, which pursue this goal with joint integral policies, strategies and programmes. **It is a concept of implementing a universal health-friendly policy, or a health policy with a long-term whole-of-government approach.**

Health outcomes are observed incidences, such as morbidity, disability, mortality, self-assessed health and prosperity.

References and resources

Dahlgren G, Whitehead M (2006). European strategies for tackling social inequities in health: Levelling up Part 2. Copenhagen, WHO Regional office for Europe.

WHO (2002). World health report 2002. Reducing risks, promoting healthy life. Geneva, World Health Organization.

Wilkinson RG (2005). The impact of inequality: how to make sick societies healthier. London, Routledge.

Acronyms and abbreviations

BMI	Body mass index
CINDI	Countrywide Integrated Non-communicable Disease Intervention
EHIS	European Health Interview Survey
EU	European Union
FAS	Family affluence scale
GDP	Gross domestic product
HBSC	Health Behaviour in School-Aged Children: a WHO Collaborative Cross-National Study
HCHIA	Health Care and Health Insurance Act
HIIS	Health Insurance Institute of Slovenia
IMAD	Institute of macroeconomic analysis and development
NIPH	National Institute of Public Health
NUTS	Nomenclature of Territorial Units for Statistics
OECD	Organisation for Economic Co-operation and Development
PIS RS	Perinatal Information System of the Republic of Slovenia
SE	Socioeconomic
SMARS	Surveying and Mapping Authority of the Republic of Slovenia
SORS	Statistical Office of the Republic of Slovenia
TARS	Tax Administration of the Republic of Slovenia
WHO	World Health Organization
ZFO-1A	Amendment to the Financing of Municipalities Act

I. Introduction

Social inequalities in health are systematic differences in health between groups in society according to their social position, as measured by income level and security, number of years in education, employment conditions and security, housing and environmental conditions. As such these inequalities are socially produced (and therefore modifiable) and unfair. We can observe such inequalities between countries and between individuals and groups within them. A comprehensive knowledge of health inequalities, especially how they are produced and the specific patterns and magnitude within a country is essential to generating appropriate solutions to reduce them.

Determinants of health

The root causes (determinants) of observed social inequalities in health need to be understood before more effective policies can be formulated to tackle them. Conceptually, however, the determinants of overall population health have often been mixed up with the determinants of social inequalities in health, and both sets of determinants have been treated the same for policy considerations. The danger of such an approach is that the ensuing policy tends to be very general and is ineffective in reducing the health divide. This section therefore aims to make this distinction clear. It starts by reviewing the main determinants of health. It then goes on to outline the five key mechanisms by which these determinants of health may cause social inequalities in health (Dahlgren & Whitehead, 2006).

The determinants of the health of the population can be conceptualized as rainbow-like layers of influence (see Fig. 1.1).

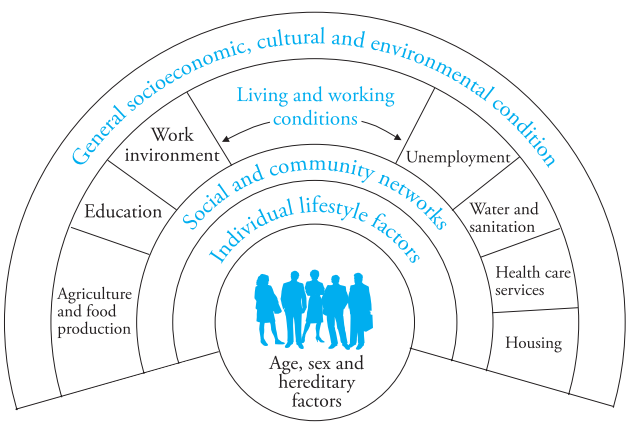

Fig. 1.1. Determinants of health (Dahlgren & Whitehead, 2006)

In the centre of the figure, individuals possess age, sex and constitutional characteristics that influence their health and that are largely fixed. Surrounding them, however, are influences that are theoretically modifiable by policy. First, there are personal behaviour factors, such as smoking habits and physical activity. Second, individuals interact with their peers and immediate community and are influenced by them, which is represented in the second layer. Next, a person's ability to maintain their health (in the third layer) is influenced by their living and working conditions, food supply, and access to essential goods and services. Finally, as mediator of population health, economic, cultural and environmental influences prevail in the overall society. This model for describing health determinants emphasizes interactions: individual lifestyles are embedded in social norms and networks, and in living and working conditions, which in turn are related to the wider socioeconomic and cultural environment. The determinants of health that can be influenced by individual, commercial or political decisions can be positive health factors, protective factors, or risk factors. (Dahlgren & Whitehead, 2006).

Determinants of socioeconomic health inequalities

Knowledge of the determinants of health shown in Fig. 1.1 is necessary, but not sufficient for analysing the determinants of health inequalities, because the most important determinants of health may differ for different socioeconomic groups. For example, unhealthy physical work environments are a major risk factor for unskilled workers in Sweden, while constituting only a minor risk for senior civil servants or for the population as a whole (Lundberg, 1991). Poverty is another example. For a high-income country, the role played by poverty in determining the overall health of the population may only be a minor one. The size of its role will depend on how many individuals live in poverty in that country. In a country in which, for example, the prevalence of poverty is low, poverty may only account for 2% of the total burden of disease on the population. At the same time, it could account for 10% of the difference in the burden of disease between affluent and low-income groups within that country.

It is therefore of critical importance to distinguish between social determinants of health for the overall population and the social determinants for specific groups of the population. One approach to understanding the root causes of social health inequalities is to focus on the distinct pathways and mechanisms by which the known risk factors and risk conditions cause the social gradient and health inequalities (Diderichsen, Evans & Whitehead, 2001).

The five key mechanisms presented below contribute to the better understanding of socioeconomic inequalities in health.

1. Distribution of power and access to other resources

Basic social structures and processes determine the conditions of daily life. Inequalities caused by social norms, policies and practices are systematic, as they affect the distribution of power (access to the levers of control), welfare and other necessary social resources (WHO, 2008).

The determinants of social inequalities in health resulting from the different distributions of power and resources can be measured at the level of the group, or societal level (Diderichsen, Evans & Whitehead, 2001). Efforts to reduce differences in education between socioeconomic groups, for example, are likely to have a positive effect from a health equity perspective, as they increase the power of (and opportunities for) less privileged groups to avoid unhealthy living and working conditions. Education can also foster greater understanding between different groups in society, and thereby help to reduce the distance between them.

2. Different levels of exposure to health hazards

There are different levels of exposure to health hazards depending on socioeconomic status. Exposure to risk factors (material, psychological and behavioural) is associated with social status. The lower the socioeconomic status, the greater the exposure to many risk factors – an important casual pathway to the observed social gradient in health. For an effective approach to reducing health inequalities, it is necessary to monitor the different risk factors for each socioeconomic group separately, in order to determine key action points. In this way we can determine the key risk factors that have a higher attributed value by socioeconomic group, and which may differ from the key risk factors for the entire population.

When the social gradient of a specific determinant of health is clearly visible, this is a signal that specific approaches and additional endeavours are needed, along with financial resources, to reduce the risk factors of the most vulnerable. However, this does not mean that we only develop policies, programmes and approaches targeting vulnerable groups, but rather that we upgrade the universal policies and programmes for the entire population, incorporating specific oriented approaches for reducing health inequalities.

3. The same level of risk factors leads to different health consequences

The same level of exposure to risk factors can have different impacts on different socioeconomic groups. For example, in Sweden, similar levels of alcohol misuse, as measured in units of pure alcohol, cause two to three times more alcohol-related diseases and injuries among male manual workers than among male civil servants (Hemmingsson, 1998). This impact differential between the groups can be explained by differences in drinking patterns and social support systems at work and at home. The different impacts can also be attributed to the fact that the less privileged socioeconomic groups are exposed more frequently and for longer periods to several risk factors simultaneously, which may act synergistically, thereby increasing the risk of this group. At the same time, these groups are less likely to avoid the negative health consequences of each risk factor.

4. The impact of socioeconomic determinants of health throughout life

The effects of socioeconomic determinants of health accumulate throughout a lifetime. It is this accumulation of negative effects across a lifespan that significantly affects the differences in health and life expectancy of different socioeconomic groups. Many events early in life generate poor health later on, and material circumstances in early life are stronger predictors of health status later in life than social position during adulthood (Lynch, Kaplan & Salonen, 1997; Eriksson et al., 1999). Deprivation during childhood has also proved to be associated with experiences of poor health in adulthood, for example in countries of central and eastern Europe and members of the Commonwealth of Independent States (Walters & Suhrcke, 2005).

These effects are passed from parents to their children, as they are closely related to social background. For example, the social position of parents influences the educational achievements of their children, which in turn influence working conditions and salary levels when the children grow up.

5. Different social and economic impacts of falling ill

The poor health of an individual can have a significant impact on their life; for example, through loss of job and income, facing social exclusion, and greater financial expenditure for health care treatment. All this can affect a further deterioration of health. Evidence of this particular pathway has been found in both Sweden and the United Kingdom, where there are social gradients in employment rates for people with chronic illness or disability. Sick or disabled individuals with lower socioeconomic status lose their jobs more quickly, while job prospects fall with the lowering of their socioeconomic status (Lindholm, Burström & Diderichsen, 2002; Burström et al., 2003).

What is socioeconomic status and how is it measured?

We can define socioeconomic status as the relative position of a family or individual on the hierarchical social scale, based on access to and control over property, prestige and power. To measure socioeconomic status we normally employ indicators that can relate to an individual or a geographic area. Frequently, the limitation of socioeconomic indicators is such that they only describe the current status, even though we know that also previous circumstances affect health outcomes (Dolk et al., 1995). Research findings indicate that health inequalities are identified regardless of which socioeconomic status indicator we use (Marmot et al., 1991; Monteil & Robert-Bobee, 2005). The decision to use one or another indicator is most frequently dependent on the availability of data. The most frequently used indicators of the socioeconomic status of an individual are: education, which indicates intangible resources, such as knowledge, skills and abilities; occupation, which reflects work-related circumstances (Krieger, Williams & Moss, 1997; Lynch & Kaplan, 2000; Dahl, 1994); and income, which indicates accessibility of tangible resources and services (Wilkinson & Pickett, 2006; Laaksonen et al., 2005; Sacker et al., 2001). When we do not have information on the socioeconomic status of an individual, we use proxy indicators that show the socioeconomic characteristics of the geographic area in which the individuals live. Area-based indicators include, for example, the percentage of people in an area without secondary school-level education, regional unemployment rate, the percentage of the population in manual occupations, value of standard property, and various combined area-deprivation indicators. Selected indicators of area deprivation for smaller geographical areas produce comparable estimates as individual indicators (Subramanian et al., 2006), but we must be aware that analyses reflect the experience of the entire population in one geographic area and not that of a single inhabitant or group within them.

In our analysis, we used municipalities as basic geographic areas. We divided the municipalities into quintiles relative to selected socioeconomic indicators, ranking the municipalities relative to the average income per capita (measured as income tax base per capita). Group 1 (first quintile) contained municipalities with the lowest income per capita or highest level of registered unemployment (lowest socioeconomic status), and group 5 (the fifth quintile) contained municipalities with the highest income per capita or lowest level of registered unemployment (highest socioeconomic status). The distribution of municipalities is shown in Fig. 1.2.

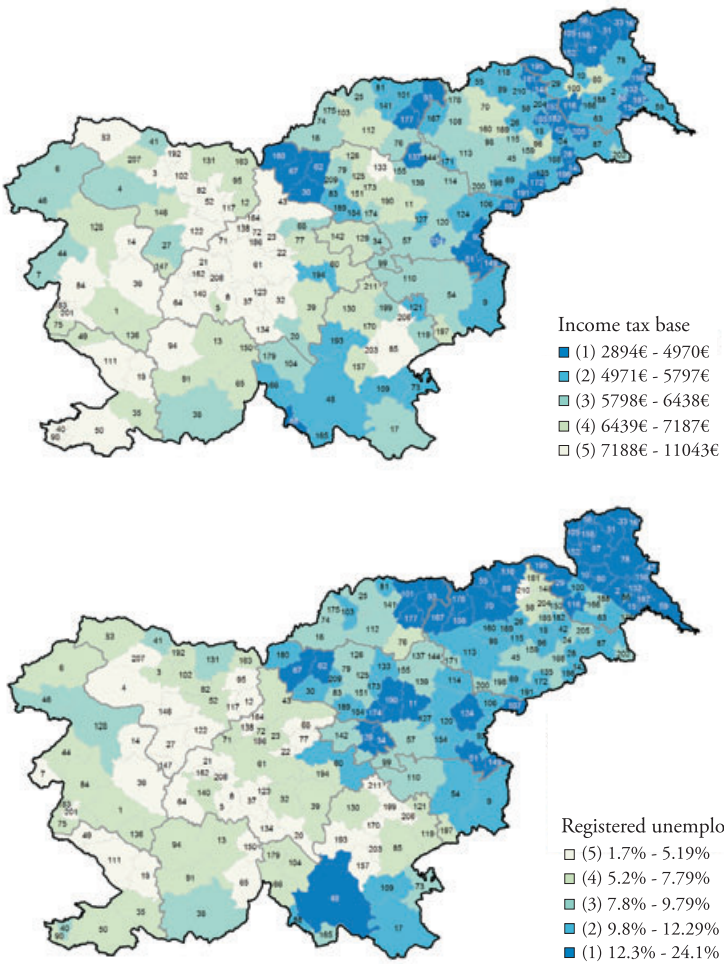

Fig. 1.2 Distribution of Slovenian municipalities into quintiles relative to income tax base per capita and registered unemployment rate, 2004–2008

Source: TARS, 2004-2008 (recalculations IMAD); SMARS 2010.

Note: Municipalities are divided into quintiles. Group 1 comprises municipalities with the lowest income per capita or the highest registered unemployment rate. The distribution of municipalities into five groups relative to income per capita is not the same as the distribution of municipalities into five groups relative to the registered unemployment rate.

Socioeconomic review of Slovenia

Slovenia's population has increased significantly in recent years, largely thanks to high net migration. This was a result of favourable economic trends and the consequent increase in demand on the labour market after Slovenia joined the European Union (EU). The number of births has been rising since 2004. Since 2006 the population has once again been growing due to a positive natural increase. Slovenia's population was recorded as 2 042 335 inhabitants in June 2009. Life expectancy is increasing. The share of old people (aged 65 years and over) is increasing within the population structure (IMAD, 2010b).

Following an extended period of improvement, the labour market situation started to deteriorate in the last quarter of 2008 under the impact of the global crisis. The number of unemployed individuals increased, which resulted in a higher number of recipients of financial social assistance and unemployment benefits. The Government responded to the crisis by passing intervention acts aiming to preserve jobs and by increasing the participation of the unemployed in active employment policy programmes, thus preventing even greater increase in unemployment (IMAD, 2010b).

The data on population expenditure show that in 2007, household quintiles with the highest consumption spent 4.2 times more than household quintiles with the lowest consumption. Households with the highest consumption (IV and V quintiles) allocated the greatest share of expenditure for transport, followed by food, while the other quintiles spent the highest share on food, and then on housing. In 2008, the households in Slovenia were among the least indebted in the EU (IMAD, 2010b).

Access to public services and goods of general interest is improving in most areas, often due to payments from private sources. In the **health care** system, the burden of household health expenditures has increased in recent years. Accessibility of services and **social care** programmes has been improving. Despite the growing need for long-term care as a result of an ageing population, access to institutional care is increasing due to the growing capacity of homes for the elderly, while Slovenia still lags behind other European countries in the development of home care in particular. Expenditure for long-term care has been increasing in real terms, mainly from private sources since 2008. Total expenditure on long-term care as a share of gross domestic product (GDP) is hovering at the average level for the 25 countries belonging to the EU before January 2007 (EU25) (IMAD, 2010b).

Housing conditions are generally improving, though they still tend to be rather unfavourable for low-income groups. Approximately half of low-income households and tenants find it hard to meet their housing costs. The housing fund is still increasing, but the problem is the high cost of housing, hindering even average-income households from acquiring adequate dwellings through purchase or rent (IMAD, 2010b).

Movements in the areas of participation in education, completion of **education** and changing the educational structure are largely favourable. The main challenges include ensuring sufficient preschool capacity, reducing the impact of socioeconomic factors on students' academic achievements, and decreasing differences in participation of adults in education with regard to their socioeconomic characteristics (age, formal education attained, activity status and profession). Access of households to the **Internet** has increased markedly over recent years, in particular the share of households with broadband connection, which is at the level of the EU average (IMAD, 2010b).

Based on the Laeken indicators[1], we can conclude that social cohesion in Slovenia is relatively high, as Slovenia is ranked at the top of the EU. Slovenia recorded the lowest income inequality in 2008, the lowest share of completely unemployed households with dependent children, and the lowest share of early school leavers. A relatively effective system of social transfers played an important role in lowering income inequality in Slovenia, given that the risk of poverty would be almost double were it not for this social state aid. Slovenia also ranks favourably in the EU in terms of other indicators (such as crime rate, number of unlawful deaths, as well as share of the population feeling threatened in their immediate neighbourhood). However, Slovenia notably exceeds the EU average in terms of fatal road traffic accidents and suicides. Trust in other people and in institutions – as an indicator of social capital – is also low in Slovenia. Material deprivation, while still relatively low compared with the EU, has increased in 2008. The risk of poverty, though still among the lowest in the EU, has increased somewhat in 2008. Certain population groups, such as the unemployed, the elderly, single parents, tenants, and so on, remain highly vulnerable to the risk of poverty (IMAD, 2010b).

The share of government expenditure that is directly and indirectly related to social development as a share of GDP has been declining in recent years, particularly for social protection. In 2007, Slovenia allocated close to two thirds of all government expenditure as a share of GDP (according to the national accounts methodology and classification by function) for **expenditure directly or indirectly related to social development** (expenditure on social protection, health, education, recreation and culture). In 2007, this expenditure was below the EU27 average (Slovenia: 28.3% of GDP; EU27: 30.8% of GDP) and lower than in the previous two years. The bulk of expenditure is allocated for social protection, but social protection expenditure as a share of GDP has dropped significantly since 2003 and is much below the EU27 average. Expenditure on health is also lower than the EU27 average. The share of expenditure for education is higher than the EU27 average, but has been declining since 2005 (IMAD, 2010b).

1 The Laeken indicators is a set of common European statistical indicators on poverty and social exclusion.

Socioeconomic development and priorities for social progress are defined in **Slovenia's Development Strategy,** adopted by Parliament in 2005. The realization of **objectives** of economic and social development was interrupted in 2009 by the economic crisis. In terms of the achievement of the **central social objective**, namely the sustainable increase of welfare and quality of life, the period of crisis mostly signified stagnation or deterioration, which the Government mitigated with anti-crisis measures. The economic crisis has seen a rapid deterioration in the labour market, which has reflected negatively on the living conditions of the population. In early 2010, the Government adopted strategic directions for economic policy and proposals for structural changes. The Stability Programme – 2009 supplement, and the Slovenian Exit Strategy 2010–2013 provide for a gradual withdrawal of anti-crisis measures, consolidation of public finances, institutional adjustment, and other structural changes. Thus, the consistency of short-term anti-crisis measures and long-term strategic directions will be ensured, while consequently drawing nearer to the objectives of Slovenia's Development Strategy (IMAD, 2010a).

References and resources

Burström B et al. (2003). Winners and losers in flexible labour markets: the fate of women with chronic illness in constraining policy environments – Sweden and Britain. International Journal of Health Services, 55:806–817.

Dahl E (1994). Social inequalities in ill-health: the significance of occupational position, education, and income results from a Norwegian survey. Sociol Health Illn, 16:644–667.

Dahlgren G, Whitehead M (2006). European strategies for tackling social inequities in health: Levelling up Part 2. Copenhagen, WHO Regional office for Europe.

Diderichsen F, Evans T, Whitehead M (2001). The social basis of disparities in health. In: Evans T et al., eds. Challenging inequities in health – from ethics to action. New York, Oxford University Press.

Dolk H et al. (1995). A standardisation approach to the control of socioeconomic confounding in small area studies of environment and health. J Epidemiol Community Health, 49(Suppl. 2):9–14.

Eriksson JG et al. (1999). Catch-up growth in childhood and death from coronary heart disease: longitudinal study. BMJ, 318(7181):427–431.

Hemmingsson T (1998). Explanations of social class differences in alcoholism among young men. Soc Sci Med, 47(10):1399–1405.

IMAD (2010a). Development report 2010. Ljubljana, Institute of Macroeconomic Analysis and Development of the Republic of Slovenia (http://www.umar.gov.si/fileadmin/user_upload/publikacije/pr/2010/aDR2010.pdf, accessed 3 January 2011).

IMAD (2010b). Social overview 2009. Ljubljana, Institute of Macroeconomic Analysis and Development of the Republic of Slovenia (http://www.umar.gov.si/fileadmin/user_upload/publikacije/socrazgledi/2009/socialni_razgledi_ang-2009-splet.pdf, accessed 13 January 2011).

Krieger N, Williams DR, Moss NE (1997). Measuring social class in US public health research: concepts, methodologies, and guidelines. Annu Rev Public Health, 18:341–378.

Laaksonen M et al. (2005). The influence of material and behavioural factors on occupational class differences in health. J Epidemiol Community Health, 59:163–169.

Lindholm L, Burström B, Diderichsen F (2002). Class differences in the social consequences of illness? J Epidemiol Community Health Journal, 56:188–192.

Lundberg O (1991). Causal explanations for class inequality in health – an empirical analysis. Soc Sci Med, 32(4):385–393.

Lynch I, Kaplan G (2000). Socioeconomic position. In: Berkman L, Kawachi I, eds. Social epidemiology. New York, Oxford University Press: 13–35.

Lynch JW, Kaplan GA, Salonen JT (1997). Why do poor people behave poorly? Variation in adult health behaviours and psychosocial characteristics by stages of the socioeconomic lifecourse. Social Science & Medicine, 44(6):809–819.

Marmot MG et al. (1991). Health inequalities among British civil servants: the Whitehall II study. Lancet, 337:1387–1393.

Monteil C, Robert-Bobee I (2005). Les differences sociales de mortalitee: en augmentation chez les hommes, stables chez les femmes. INSEE Premiere, 1025:1–4.f

Sacker A et al. (2001). Dimensions of social inequality in the health of women in England: occupational, material and behavioural pathways. Soc Sci Med, 52:763–781.

SMARS (2010). Surveying and Mapping Authority of the Republic of Slovenia. The Register of Spatial Units 2010.

Subramanian SV et al. (2006). Comparing individual- and area-based socioeconomic measures for the surveillance of health disparities: a multilevel analysis of Massachusetts births, 1989–1991. Am J Epidemiol, 164:823–834.

TARS (2004-2008). Tax Administration of the Republic of Slovenia. Data on income tax base per capita 2004-2008. Recalculations by IMAD.

Walters S, Suhrcke M (2005). Socioeconomic inequalities in health and health care access in central and eastern Europe and CIS: a review of recent literature. Copenhagen, WHO Regional Office for Europe (Working paper 2005/1).

WHO (2002). World health report 2002. Reducing risks, promoting healthy life. Geneva, World Health Organization.

WHO (2008). Closing the gap in a generation. Commission on social determinants of health. Final report. Geneva, World Health Organization.

Wilkinson RG, Picket KE (2006). Income inequality and population health: A review and explanation of the evidence. Soc Sci Med, 62:1768–1784.

II. Health inequalities in Slovenia

Throughout recent decades, researchers have observed a significant impact of socioeconomic factors on different health outcomes, such as life expectancy, mortality, morbidity, disability[1], experience of health, as well as accessibility and use of health services. So far in Slovenia we have monitored the situation unsystematically; nevertheless, the work to date and the situation achieved in the field of data collection and monitoring occurrences significant for the assessment of health and risk indicators, together with the completed analyses have paved the road for preparing this more comprehensive report on health inequalities and the debate on systematic monitoring in this important area.

On the initiative of the Ministry of Health, along with the participation of the National Institute of Public Health (NIPH), the Statistical Office of the Republic of Slovenia (SORS), the Institute of Macroeconomic Analysis and Development (IMAD), the Institute of Oncology Ljubljana, the Centre for Health and Development of Murska Sobota and the WHO Regional Office for Europe, we prepared an analysis on health inequalities based on currently available data. We analysed a variety of health and health care indicators, such as morbidity, mortality, use of health services and known lifestyle factors that affect the health of the population and correlated them with certain socioeconomic factors. The thematic areas that were included represent significant public health issues, in terms of prevalence or frequency; their impact on the working capacity of the population; premature mortality; the burden on health services; the financial burden; and the quality of life in Slovenia and Europe.

We used different data sources for the analyses, including both routine and survey data, which yielded information on health, health care, the labour market, population income and socioeconomic status. The availability and reliability of currently available data presented a significant obstacle to the preparation of this analysis. More information on the methods used is available in Annex 1 Methodology.

Differences in health between countries in Europe

We frequently compare health outcomes across countries. We have complemented these comparisons with a display of outcomes within Slovenia. Figure 2.1 shows the differences in mortality between EU Member States in 2006, together with the mortality in the lowest and highest Slovenian municipality quintiles relative to the income tax base per capita for 2004–2008. By using the average mortality over a 5-year period in Slovenia, we obtained a more reliable mortality estimate (see Annex 1 Methodology). The age-standardized mortality rate in Slovenia was 680 per 100 000 inhabitants, which ranked it in 18th place in the EU; the municipality quintile with the highest income tax base per capita ranked 12th; and the municipality quintile with the lowest income tax base per capita ranked it in 22nd place.

1 According to the medical model, disability is defined as a problem faced by an individual, directly caused by disease, injury or other medical status that requires medical care in the form of individual treatment provided by professionals.

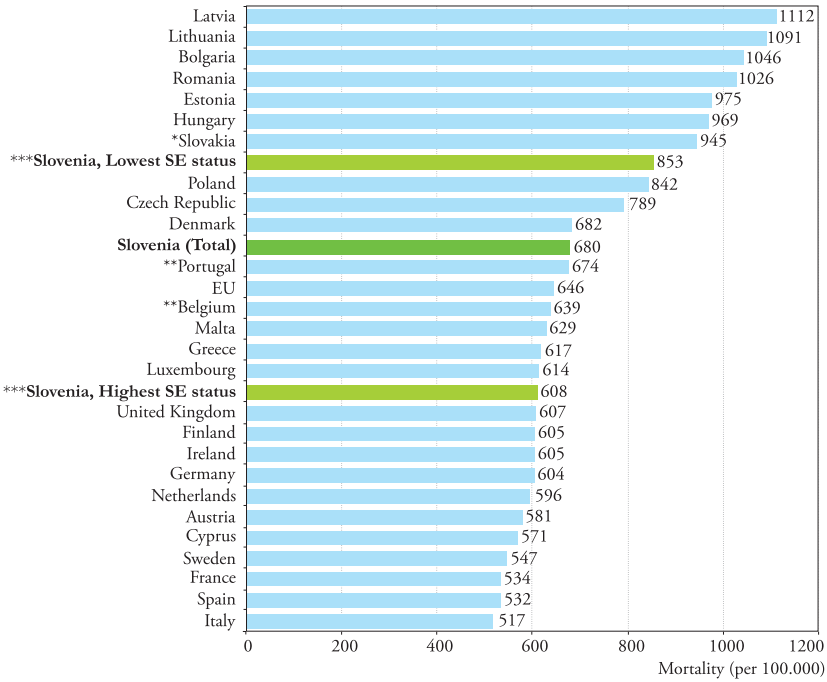

Fig. 2.1 Mortality from all causes in the EU and Slovenia per 100 000 inhabitants, 2006

Source: WHO, HFA 2010; NIPH Database of deaths 2004-2008.

Note 1: Age-standardized mortality rates are shown per 100 000 inhabitants; The average mortality in the lowest Slovenian municipality quintile income tax base per capita (lowest socioeconomic status) and the highest quintile (highest socioeconomic status) are also shown for Slovenia.

Note 2: *Data for 2005; ** Data for 2004; *** Data for 2004–2008.

In 2006, infant mortality in the EU Member States was between 2.2 and 13.9 per 1000 live births (Fig. 2.2). In Slovenia in the same year, infant mortality was 3.4 per 1000 live births, ranking it among the most successful countries (in 6th place). Figure 2.2 also shows infant mortality for infants of mothers with tertiary education and infant mortality for infants of mothers with primary school education or less in Slovenia for the period 2004–2008. The infant mortality rate for infants of mothers that had tertiary education was 2.8 per 1000 live births (equivalent to 2nd place), and the infant mortality rate for infants of mothers with primary school education or less was 7.3 per 1000 live births (equivalent to 24th place).

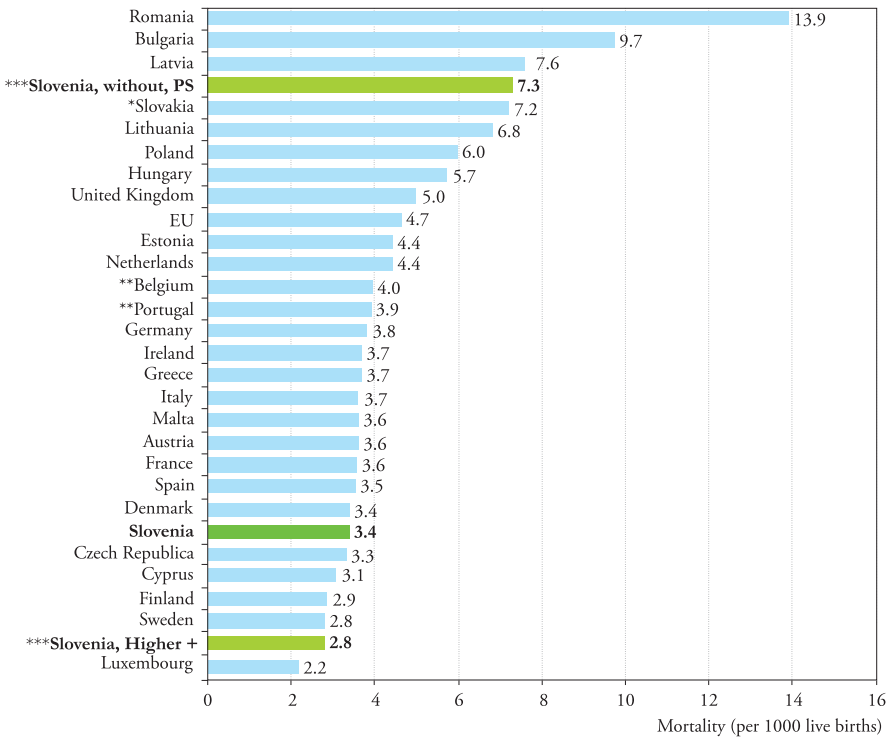

Fig. 2.2 Infant mortality in the EU and Slovenia per 1000 live births, 2006

Source: WHO, HFA 2010; NIPH Database of deaths 2004-2008.

Note 1: Mother's education: high+ = tertiary education; without, PS = primary school-level education or less.

Note 2: * Data for 2005; ** Data for 2004; *** Data for 2004–2008.

In 2006, premature mortality (under 65 years of age) due to unintentional injuries in the EU countries was between 7.2 and 93.9 per 100 000 inhabitants. Slovenia ranked among the middle third of the EU countries, while the Slovenian population from municipalities with the lowest income tax base per capita ranked among the five countries with the highest mortality due to unintentional injuries (Fig. 2.3).

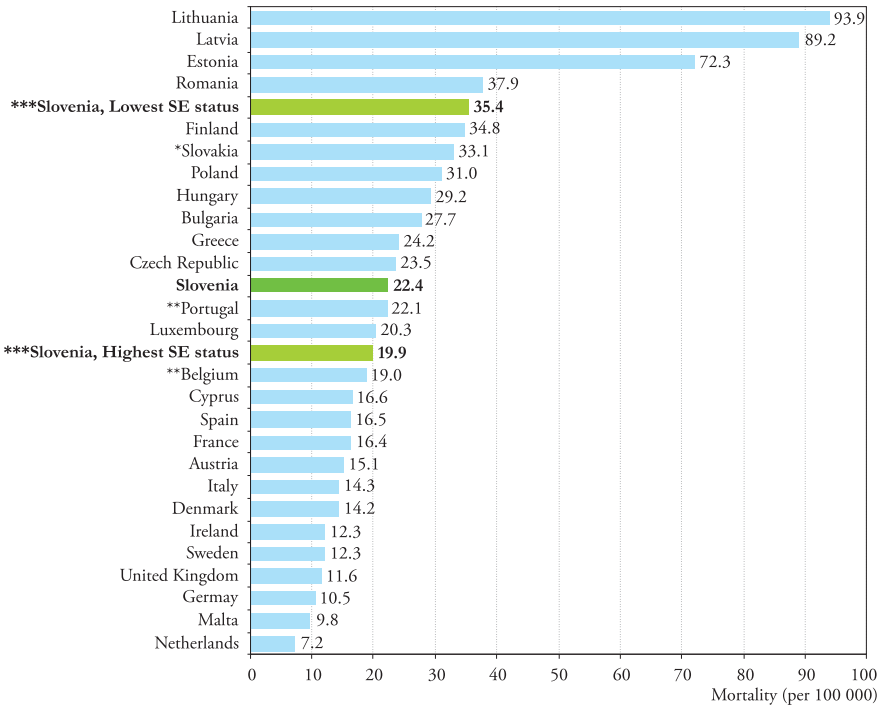

Fig. 2.3 Premature mortality (0-64 years) due to unintentional injuries in the EU and Slovenia, 2006

Source: WHO, HFA 2010; NIPH Database of deaths 2004-2008.

Note 1: Age-standardized mortality rates are shown for individuals aged 0–64 years per 100 000 inhabitants; The mortality rate in the group of municipalities with the lowest (lowest socioeconomic status) and the highest income tax base per capita (highest socioeconomic status) is also shown for Slovenia; The municipalities were divided into quintiles.

Note 2: * Data for 2005; ** Data for 2004; *** Data for 2004–2008.

The analysis has shown that inequalities in mortality within Slovenia are relatively large and rank the more privileged groups of municipalities in Slovenia together with the older EU Member States (EU15), and the underprivileged groups of municipalities among the newer EU Member States (EU10). The example of infant mortality stands out, with very good results in comparison with other countries for infants born to more educated mothers who are at the top of the list, while infant mortality among those born to mothers with a lower level of education is at the tail-end of the EU.

THE START OF LIFE AND SOCIOECONOMIC INEQUALITIES

Socioeconomic factors also affect the health of mothers and their neonates (Fisher, 2008; Gissler et al., 2003). Health during the intrauterine development of the foetus and in early childhood is the basis for health in adulthood. There is growing evidence that poor health in this period of life increases the risk of developing chronic diseases (Wadsworth & Butterworth, 2006).

Preterm delivery and low birth weight

Premature birth (before the 37th week of gestation) and low birth weight (under 2500 grams) are among the most important causes of morbidity and mortality of neonates in the developed world. In the period 2004–2008, 5.7% of singletons born in Slovenia were premature. For women in the lowest educational group, the risk of preterm delivery was on average 30% higher than for women in the highest educational group. After the age of 35, the risk was 80% higher (NIPH PIS, 2004–2008; see Annex 1 Methodology). Most commonly low birth weight is the consequence of premature birth, but also occurs in full-term babies. Factors affecting the reduced growth of the child are, among others, the mother's smoking habits, alcohol consumption and drug use, as well as inadequate nutrition. For women in the lowest educational group, the risk of having a full-term child with low birth weight was on average 2.2 times higher than that for women in the highest educational group (NIPH PIS, 2004–2008).

Preventive health checks are also important for the good outcome of a pregnancy. In Slovenia, every pregnant woman has the right, by law, to 10 preventive examinations (Official Gazette of the Republic of Slovenia, 2006 (HCHIA)). Most pregnant women come for their examinations regularly from early pregnancy, but some never do or they have their first examination relatively late. In the period 2004–2008, only 0.5% of women did not have any examinations during pregnancy; however, the risk that a woman did not come for an examination during pregnancy was 20 times higher for women from the least educated group than for women from the highest educational group (NIPH PIS, 2004–2008).

Stillbirths, perinatal mortality and infant mortality

All these differences are also reflected in child mortality. **Stillbirth, perinatal mortality and infant mortality**[2] are among the most important indicators not only of the health and health care of mothers and infants, but also of the population in general. In

2 Stillbirth = number of stillborn babies per 1000 births. Perinatal mortality = number of stillborn babies and deaths in the first week of life per 1000 births. Infant mortality = number of deaths in the first year of life per 1000 live births.

Slovenia, in the period from 2004 to 2008 there were 5.2 stillbirths per 1000 births. Women in the lowest educational group, who were without education or with no more than primary school education, had a 74% greater risk of having a stillborn child than women in the highest educational group. For women with vocational education, this risk was greater by 33%. In the same period, there were 7 perinatal deaths per 1000 births. Women in the lowest educational group had an 88% greater risk of perinatal death of a child compared with women in the highest educational group. For women with vocational education, this risk was greater by 28%. In 2004 to 2008 there were 3.2 deaths in the first year of life per 1000 live births. Also infant mortality was lowest for mothers with tertiary education, while children born to mothers from the lowest educational group had a 2.6 times greater risk of death within the first year of life (Fig. 2.4) (NIPH PIS, 2004–2008).

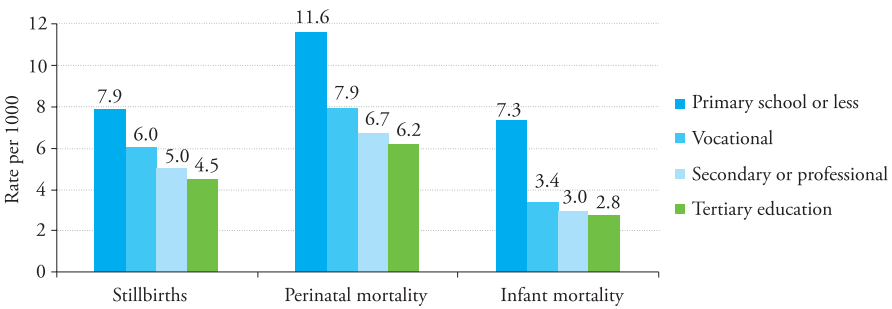

Fig. 2.4. Stillbirths, perinatal mortality, and infant mortality by the level of the mother's education, Slovenia, 2004–2008

Source: NIPH PIS 2004-2008; NIPH Database of deaths 2004-2008.

Note: Stillbirth = number of stillborn babies per 1000 births. Perinatal mortality = number of stillborn babies and deaths in the first week of life per 1000 births. Infant mortality = number of deaths in the first year of life per 1000 live births.

This analysis showed that significant differences in the health of mothers and neonates related to the social status of the mother, which we defined by achieved educational level, are also present in Slovenia. The differences are greater for older women, which is also recognized elsewhere (Faireley & Leyland, 2006).The data show that less educated women are exposed to more and a greater intensity of risk factors, among which is also the lack of use of health services. Based on the existing data we cannot differentiate whether this is due to poor accessibility of health services or lower awareness. It is known that women from lower socioeconomic groups have more addiction-related diseases and other mental disorders, and are more often victims of violence, suggesting that their needs are more complex. Studies also find that these women often do not receive adequate care, even when looking for it (Fisher, 2008).

DOES LIFESTYLE DIFFER RELATIVE TO SOCIOECONOMIC STATUS?

Many studies have found that lifestyle is associated with socioeconomic status, which must be considered when interpreting health inequalities and actions for reducing them. Below we describe some of health-related behaviours and their relationship to socioeconomic status.

Diet

A healthy diet and adequate physical activity are important protective health factors (WHO 2003; WHO Regional Office for Europe, 2007). Unhealthy diets – especially the consumption of energy-rich fatty/sweet/salty food – are a risk factor for various chronic noncommunicable diseases and conditions, such as cardiovascular diseases, metabolic syndrome, diabetes type 2, and colorectal cancer (WHO, 2003). Risk factors related to nutrition and physical activity, are more often present in groups with lower education and lower socioeconomic status (Mackenbach, 2006; WHO Regional Office for Europe, 2007; Mackenbach et al., 2008; WHO, 2008a). This is also the case in Slovenia (Zaletel-Kragelj, Eržen & Fras, 2004; Artnik et al., 2006; Gabrijelčič Blenkuš et al., 2009).

Poor eating habits have changed through time – previously, lower socioeconomic status was related to malnutrition, whereas today it is associated primarily with the problem of excess body weight. In conjunction with nutritional factors, researchers indicated social inequalities mainly due to: lack of cultural capital (education, knowledge, and information), economic capital (availability of certain foods), and economic stresses that lead to comfort eating.

Research shows that children in Slovenia in socioeconomically deprived families consume less fruit every day – almost 4% less frequently than children from wealthier families (HBSC, 2006; see Annex 1: Methodology). Fruit is consumed more frequently by the more highly educated adult population in Slovenia, while the frequency of vegetable consumption has no noticeable differences related to education. In all educational groups, women consume fruit and vegetables significantly more frequently than men, while the least difference between genders was discerned in the highest educational group (NIPH EHIS, 2007; see Annex 1: Methodology). Inhabitants with lower self-assessed material conditions more frequently choose to eat bread, wheat and corn meal, pork, offal, meat products and eggs, margarine, mayonnaise, lard and cracklings, sugar, jams and sweet cakes, along with tea, coffee, fruit syrups and alcoholic beverages (Gabrijelčič Blenkuš et al., 2009).

Physical activity

Regular physical activity protects against most noncommunicable diseases, strengthens the musculoskeletal system, maintains the physical, mental and functional abilities of the body, helps to reduce stress, and helps to increase confidence (WHO Regional Office for Europe, 2007).

Children from socioeconomically deprived families are less frequently physically active. In the Health Behaviour in School-Aged Children (HBSC) study, the answer that they are not physically active in their spare time during the week was chosen by 13% of children from poor families and just over 8% of those from affluent families. Fewer than 5% of poorer children and almost 12% of children from more affluent families claimed to be physically active for seven hours or more per week (Fig. 2.5) (HBSC, 2006; see Annex 1: Methodology).

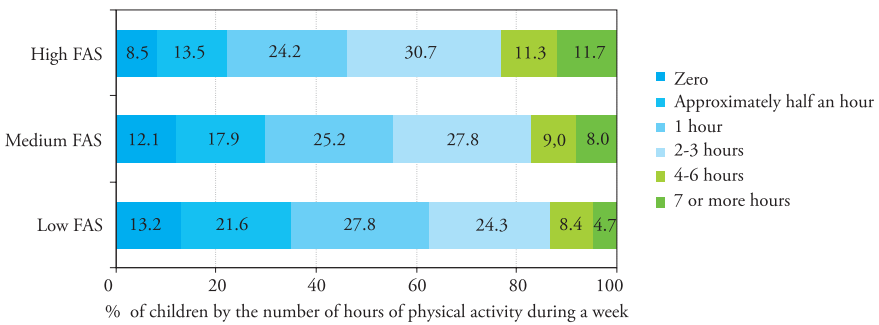

Fig. 2.5. Percentage of children by the number of hours of physical activity during a week relative to the family's socioeconomic status, Slovenia, 2006

Source: HBSC, 2006.

Notes: FAS index represents the socioeconomic status of a family; High FAS: high socioeconomic status; Low FAS: low socioeconomic status.

Among the adult population of Slovenia, one tenth is regularly intensively physically active, and one fifth is regularly moderately physically active, of which there are more men than women across all age groups (NIPH EHIS, 2007). In principle, physical activity increases with education. Most of the completely physically inactive individuals are in the lowest educational group (15%), while only 5% of them are in the highest educational group. More women than men are physically inactive across all educational groups. Interestingly, in the youngest age group (20–44 years) there are more regularly moderately and intensively physically active people from the lower educational groups, which is in contrast to the normally perceived pattern. Higher percentage of those physically completely inactive is among the unemployed than among the employed (NIPH EHIS, 2007).

Overweight and obesity

Overweight[3] and obesity[4] are risk factors for various chronic diseases and conditions (WHO Regional Office for Europe, 2006; WHO Regional Office for Europe, 2007). Figures from 2007 reveal that there are 40.6% overweight and 17.1% obese adults in Slovenia (NIPH EHIS, 2007), which is comparable to similar self-reporting survey data available in Slovenia (Zaletel Kragelj, Eržen & Fras, 2004; Gabrijelčič Blenkuš et al., 2009; CINDI Slovenia, 2008; see Annex 1 Methodology). The percentage of overweight and obese adults in Slovenia has increased since the end of the 1990s in all socioeconomic groups, with the least being in the group with the highest socioeconomic status (Fig. 2.6) (Gabrijelčič Blenkuš et al., 2009).

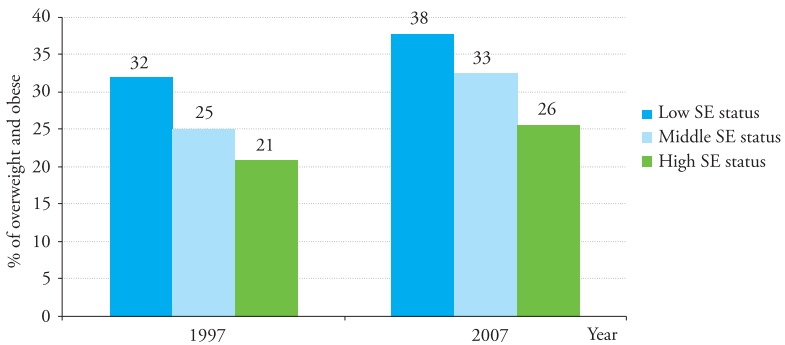

Fig. 2.6. Percentage of overweight and obese individuals relative to socioeconomic status, Slovenia, 1997 and 2008

Source: Koch, 1997; Gabrijelčič et al., 2009.

Note: Overweight and obese individuals are those who have a body mass index (BMI) larger than 25. The data on height and weight was self-reported. People ranked themselves into groups relative to self-assessed socioeconomic status.

The percentage of people with normal weight increases with rising levels of education; on the contrary, the percentage of overweight people is higher among those with lower levels of education. In the oldest age group (over 65 years of age), education does not influence nutritional status. The percentage of people with normal weight is approximately the same among the employed and unemployed population, although there are somewhat more people classified as obese among the unemployed (NIPH EHIS, 2007).

3 Overweight: Body mass index (BMI) between 25 and 29.
4 Obesity: BMI 30 or more.

Alcohol consumption

Alcohol consumption is an important risk factor for morbidity and premature mortality. In Slovenia there is a significant gender difference in drinking habits, as men have a five times greater risk of heavy drinking[6] and a five times greater risk of episodic heavy drinking[7] than women (NIPH EHIS, 2007; see Annex 1 Methodology). The connection between drinking habits and socioeconomic status is not unique. The results of studies in different countries vary. Developed countries have a larger percentage of those who drink alcohol in the higher socioeconomic classes, yet they drink more frequently but in smaller quantities. The lower socioeconomic classes have a greater percentage of abstainers[8], but those who do drink are more likely to drink to intoxication (Bloomfield et al., 2006; Baumberg & Anderson, 2005; Schmidt et al., 2010; Bloomfield et al., 2008). There is also, at least for men, a greater percentage of heavy drinkers among the less educated population, while several studies indicate that there is a higher percentage of female heavy drinkers among the more highly educated (Baumberg & Anderson, 2005; Bloomfield et al., 2006).

In analysing the relationship of drinking habits to socioeconomic status in Slovenia, differences can be seen according to socioeconomic status, but for the most part we cannot definitively assert that these differences are indeed present in the population, as they are not statistically significant (NIPH EHIS, 2007; CINDI Slovenia, 2008; see Annex 1 Methodology). This may be due to an insufficient survey sample size or non-participation in the study, since it is known that heavy drinkers are less likely to participate in surveys, and certain groups of people such as the homeless population, are often not properly covered in population studies (Mäkelä, 1999). It is also possible that participants report the amount of alcohol consumed with varying accuracy or answer the questions in accordance with social norms (Zaletel-Kragelj, Fras & Maučec-Zakotnik, 2004).

A statistically significant relationship between drinking habits and socioeconomic status in Slovenia can be ascertained in the percentage of abstainers[9], which, similar to other countries is largest among the least educated (primary school-level or less) and decreases with the level of education. The percentage of abstainers among the unemployed is also larger than in the rest of the population (CINDI Slovenia, 2008).

Heavy episodic drinking is mainly characteristic of young adults, as it is most prevalent in the 20–39 age group (NIPH EHIS, 2007; CINDI Slovenia, 2008). This age group did not show significant correlation with education, while the greatest percentage of heavy

6 Consuming alcohol in amounts that exceed the limit of low-risk drinking (drinking more than two drinks per day on average for men or more than one drink per day on average for women). One drink contains 10 g of pure alcohol – that represents 1 dcl of wine or 2,5 dcl of beer or 0,3 dcl of spirit).

7 Drinking large amounts of alcohol on a single occasion (drinking 6 or more drinks on a single occasion for men or 4 or more drinks on a single occasion for women).

8 Individuals who abstain from alcohol consumption.

9 In this survey defined as individuals that have not consumed alcohol in the past year.

episodic drinking in the age group 40 years and over is among those with vocational education. Heavy episodic drinking is highly prevalent among students. During their time studying, a quarter (26.3%) increase their use of alcohol (Krek et al., 2010). There is also a lower percentage of abstainers among them than in the rest of the population (CINDI Slovenia, 2008). Only 8.1% of students of the University of Ljubljana did not consume alcohol in the last year, and only 23% did not consume alcohol in the last month (Krek et al., 2010).

Smoking

Smoking is one of the most significant risk factors for higher mortality rates among groups with lower socioeconomic status. In Europe, tobacco accounts for 22% of inequalities in mortality among men, and 6% among women. While in Slovenia this percentage is similar for men, for women, smoking does not account for any inequality in mortality for now (Mackenbach et al., 2008).

Smoking and smoking-related conditions are a major cause of health inequalities (Menvielle et al., 2009; Martin-Moreno & Magnusson, 2008; Huisman et al., 2005b; Mackenbach et al., 2004) and arise from differences in the percentage of smokers by gender and by groups with different socioeconomic status. In most European countries the percentage of smokers is higher among men than among women. In northern European countries, prevalence of smoking in groups with lower socioeconomic status is higher in both genders, while in southern, central and eastern Europe this applies only to men and not (yet) to women (EOHSP, 2009; EUGLOREH, 2007). Notwithstanding the geographical location of countries, the prevalence of smoking among younger women (aged 16–24 years) has been higher among the less educated population (Huisman et al., 2005b).

In Slovenia according to EHIS data, 25.5% of inhabitants aged 20 years or over smoke. The percentage of smokers among men is significantly higher than among women (29.3% and 21.8%, respectively). With age, the percentage of smokers among men decreases, while for women a drop was not ascertained by this study. The percentage of smokers differs between groups with different levels of education. Among the Slovenian population aged 20 years and over, we recorded the highest percentage of smokers in the group with lower or secondary vocational education. The highest percentage of smokers among men in this age group is in the lower education groups (elementary school-level or less, and lower or secondary vocational education), while among women, the percentage of smokers is the lowest in the group with the lowest level of education (primary school-level or less). Among the group aged 20–44 years (Fig. 2.7) it is implied that there are already more smokers among the less educated women of this age, but it is worth bearing in mind that estimates by gender and educational structure can be imprecise due to smaller sample groups (NIPH EHIS, 2007; see Annex 1 Methodology).

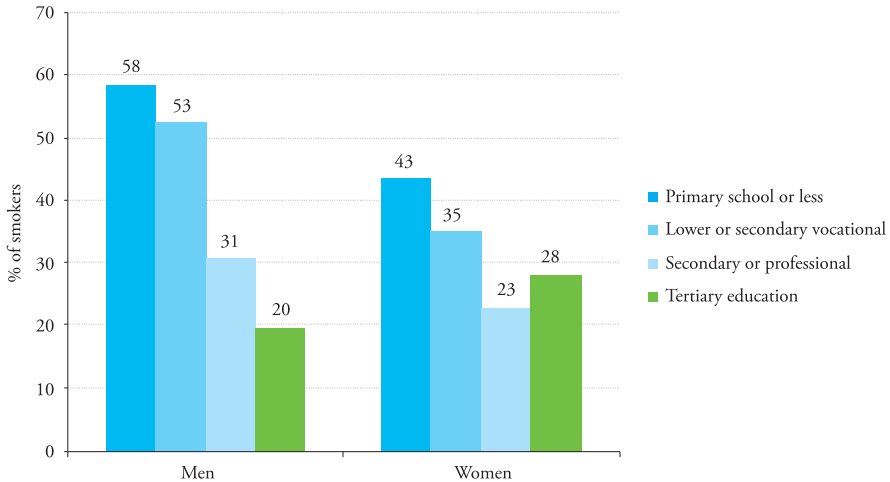

Fig. 2.7. Percentage of smokers by gender in the population group aged 20–44 years relative to education, Slovenia, 2007

Source: NIPH EHIS, 2007.

Among men, the study recorded a significantly higher percentage of smokers among unemployed men compared to employed men, which is probably partly a reflection of the lower employment rate among the lower educated men and the higher prevalence of smokers in this group. Estimates for women may be imprecise due to the small sample group, but suggest that there is no significant difference in the percentage of smokers between employed and unemployed women (NIPH EHIS, 2007).

Among Slovenian adolescents, 18% of those aged 15 years smoke at least once a week, which is approximately one in every five 15-year-old boys, and about one in every six 15-year-old girls (HBSC, 2006; see Annex 1: Methodology). A correlation between the socioeconomic status of families and regular smoking or early smoking initiation has not been proven for either gender (HBSC, 2006). However, data from other countries show that among European adolescents, low socioeconomic status of their families is mainly related to regular smoking, and not so much to the early smoking initiation among adolescents (WHO, 2008b).

HOW DO WE EXPERIENCE AND ASSESS OUR HEALTH?

Self-assessment of health status

Ascertaining an individual's comprehension of health is also important for assessing the health status of a population. Data for those over 20 years old show that only 23.6% of men and 16% of women assessed their **general health status** as being very good in the time of the survey, while 9.8% of men and 13.7% of women assessed their health as poor or very poor (NIPH EHIS, 2007; see Annex 1 Methodology). In the groups with primary and vocational education, more women than men assessed their health as being poor. The percentage of those who assessed their health as good or very good increases with increasing levels of education (Fig. 2.8).

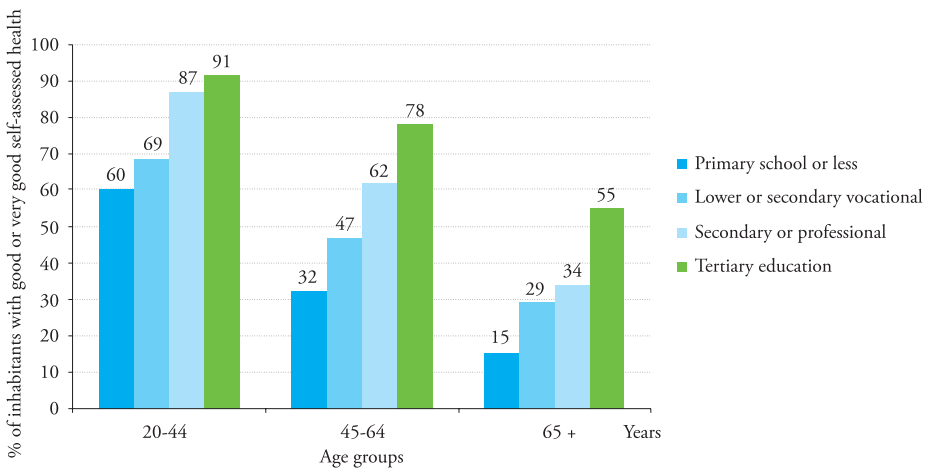

Fig. 2.8. Percentage of inhabitants with good or very good self-assessed general health status relative to education and age, Slovenia, 2007

Source: NIPH EHIS, 2007.

Note: Respondents gave their own assessment of their general health status.

Self-assessment of health is also linked to family income, as those with the least income per family member frequently assess their health as poor or very poor. With rising income, the percentage decreases (lowest income - 19.6%; highest income - 8.8%). Women's assessment of their health status is lower than that of men in all income brackets (NIPH EHIS, 2007).

Similarly, self-assessed health worsens with a decrease in self-assessed social class. Among the members of the lowest class, 34.2% respondents assess their health as poor or very poor, compared to only 3.2% in the upper-middle and upper classes (CINDI Slovenia, 2008; see Annex 1 Methodology).

Workers who perform heavy physical labour in industry (14.7%) and housewives (14.0%) most often poorly assess their health, while office and intellectual workers (2.9%) and students (3.1%) do so less commonly (CINDI Slovenia, 2008).

A significant correlation between the self-assessment of health and the socioeconomic status of families is also shown in data relating to children and adolescents (WHO, 2008b; HBSC, 2006; see Annex 1 Methodology). Children from less affluent families assessed their health as excellent in smaller percentages than children from wealthier families (40.3% versus 48.8%), and more often assessed their health as poor (3% versus 1.9%) or fair (14% versus 9%) (HBSC, 2006).

DO SOCIALLY WEAKER INDIVIDUALS FALL ILL MORE FREQUENTLY?

Cardiovascular diseases

Cardiovascular diseases are the leading cause of death in developed countries and one of the major causes of morbidity and reduced quality of life. In Slovenia they are the most frequent cause of death and reason for hospital care, as well as the sixth leading cause of treatment in primary health care. **Cardiovascular diseases** are conditional upon biological legalities, heredity and risk factors arising from lifestyle, such as smoking, inadequate diet, obesity, stress and lack of exercise (Šelb-Šemerl, 2009). The relationship between lower socioeconomic status and higher morbidity for cardiovascular diseases has been demonstrated in several studies (see, for example, Dragano et al., 2007; Kivimäki et al., 2007; Deans et al., 2009; Loucks et al., 2009). The impact of socioeconomic status on the occurrence of cardiovascular diseases is apparently even stronger in women than in men (Picciotto et al., 2006; Pilote et al., 2007; Conen et al., 2009; Lawlor, Ebrahim & Davey Smith, 2005).

Slovenian survey data show that the prevalence of arterial hypertension, heart disease (myocardial infarction, angina pectoris and heart failure) and cerebrovascular disease varies with gender, education and social class.

Prevalence of cardiovascular disease increases with age. The age group 45–64 years is particularly important, as we already expect an increase in the number of cases within it; this group also has a significant percentage of the actively working population (CINDI Slovenia, 2008; see Annex 1 Methodology). Given the level of education, prevalence of **arterial hypertension** in the age group 45–64 years is highest in the group with the lowest level of education (primary school-level or less) for both men and women, while it is the lowest in the group with tertiary education. Relative to self-assessed social class, arterial hypertension is more common for both genders for members of the working class, as compared with members of the upper-middle class (CINDI Slovenia, 2008).

Prevalence of **heart disease** (including heart attacks, angina pectoris, and heart failure) in the 45–64 age group relative to educational level is highest in the group with the lowest level of education (primary school-level or less) for both men and women, while it is lowest in the group with tertiary education. Relative to social class, heart diseases for both genders are more common among members of the lower class, in comparison with members of upper-middle class, while the difference for men was not statistically significant (CINDI Slovenia, 2008).

The prevalence of cardiovascular disease relative to social class is shown in Fig. 2.9.

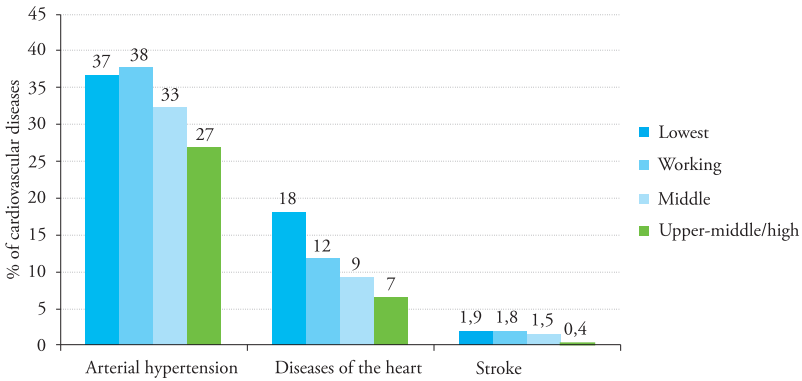

Fig. 2.9. Prevalence of cardiovascular disease relative to social class, population group aged 45–64 years, Slovenia, 2008

Source: CINDI Slovenia, 2008.

Notes: The data shown relate to the condition(s) that the respondents declared as having been diagnosed by a doctor. Included among the heart diseases are: heart attack, angina pectoris and heart failure. Individuals who participated in the survey self-ranked themselves into a social class.

Diabetes

Diabetes reduces life expectancy by 10 or more years and contributes significantly to premature mortality. In high–income countries the prevalence of type 2 diabetes is higher among people with low socioeconomic status (Dalstra et al., 2005; Brown et al., 2004). Chronic complications due to a less effective control of the disease are more common among people with low level of education (Van der Meer & Mackenbach, 1999; Brunner et al., 1999). In people with diabetes mortality rates are two- to fourfold higher in the lowest socioeconomic group. Socioeconomic gradient was established for overall mortality, cardiovascular and particularly mortality due to ischaemic heart disease among diabetics; mostly due to higher prevalence of arterial hypertension and smoking in lower socioeconomic groups (Chaturvedi, 1998; Unwin, 1996). It is assumed that the prevalence of diabetes could nearly double in the next 15 years, mostly due to the increase in the incidence of risk factors, particularly obesity, physical inactivity and characteristics of the diet, in obesogenic[10] environments, (Wild et al., 2004; OECD, 2009; Whiting, Unwin & Roglic, 2010). With the increasing number of diabetics in the younger age groups, an increase in the incidence of longterm complications of diabetes in the active population is expected.

10 An environment that fosters obesity, physical inactivity and accessibility of energy-rich food; economic development and urbanization are associated with lower level of physical activity at work, transportation, daily activities and leisure time.

According to the European Health Interview Survey (EHIS) carried out in Slovenia, a 6.9% prevalence of diabetes was found among inhabitants over 15 years of age, and the estimated number of people with known diabetes was 121 000 (NIPH EHIS, 2007; Moravec Berger & Zupanič, 2008; see Annex 1 Methodology). In 2008, approximately 84.000 inhabitants received antidiabetic drugs, which corresponds to 4.1% of the population. According to the EHIS survey, low level of education is associated with a significantly increased risk of type 2 diabetes mellitus among women aged 40–64 years. The level of education was not associated with prevalence rates of known diabetes in men. Women living in families with low income per family member had higher risk of developing diabetes (NIPH EHIS, 2007). The other survey (CINDI Slovenia, 2008; see Annex 1 Methodology) confirmed that the likelihood of developing diabetes at the age of 40–65 years is at least three times higher among individuals with lower level of education. For women with tertiary education level, the risk is 50% lower than for women with low education. The findings are consistent with the research findings from other countries (Schrijvers, Kunst & Bovendeur, 2008).

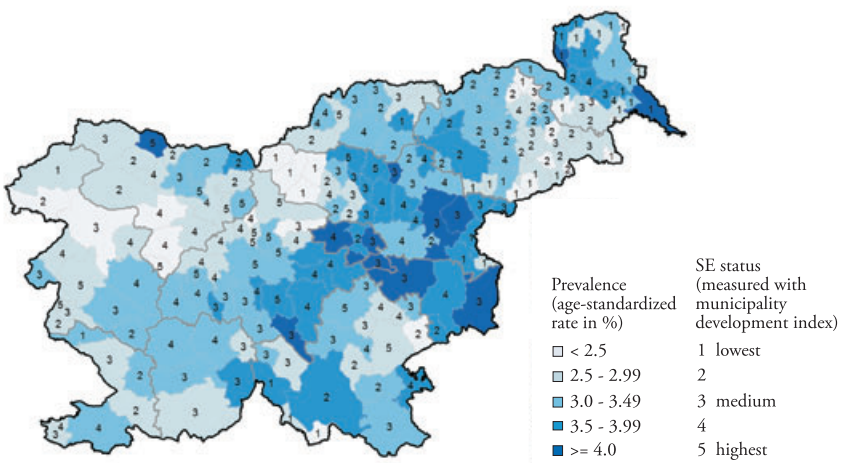

Fig. 2.10. Age-standardized prevalence rate of anti-diabetic drug recipients according to municipality and development index, Slovenia, 2008

Source: Outpatient prescription drugs database, 2008, SMARS.

The occurrence of diabetes is also associated with characteristics of the broad social environment, community and social network. Researchers have found an increased prevalence of type 2 diabetes mellitus in deprived areas (Connolly et al., 2000). In the analysis we explored whether the annual prevalence of diabetes defined by the number

of people receiving antidiabetic drugs, is associated with the municipality development index[11] (Fig. 2.10). Among the men in municipalities with the lowest development index, the percentage of people with diabetes after their 65th year of age is a third lower than the percentage in the same age group in municipalities with the best socioeconomic status, which is probably due to lower age at death and higher mortality in the most deprived communities. The age group 40–64 years shows a higher prevalence of diabetes in both men and women in communities with highest registered unemployment rates, however the finding is marginally significant (Fig. 2.11).

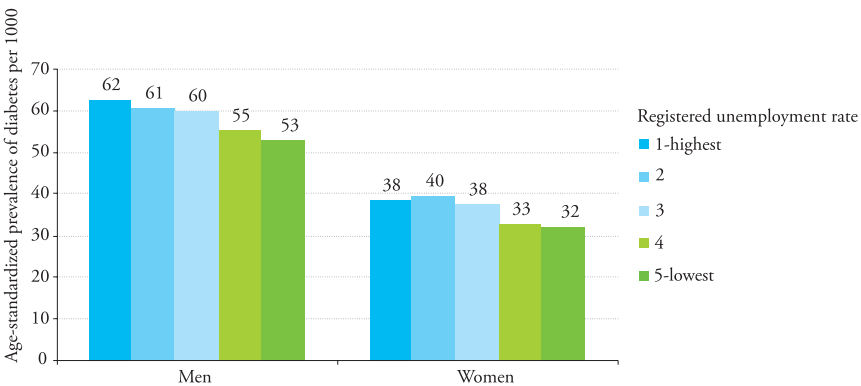

Fig. 2.11. Age-standardized prevalence rate of anti-diabetic drug recipients aged 40–64 years by municipality quintiles relative to the registered 2004–2008 employment rate by gender, Slovenia, 2008

Source: Outpatient prescription drugs database, 2008.

Note: The age-standardized rate per 1000 inhabitants is shown. See Fig. 1.2.

In Slovenia, a broad availability of medicines, medical aids and treatments at the primary and secondary health care level are available without financial barriers for diabetics; however, the universal health insurance by itself does not address inequalities related to diabetes and should also be explored from the aspect of social determinants. To this end, it is also important to highlight inequalities related to the health system, such as whether improvements in the quality of health care are equally delivered to different socioeconomic groups. This information could have impact on decisions in implementing change and evaluating the effects of the Diabetes Prevention and Care Development Programme 2010-2020 brought about in the year 2010 (Ministry of Health, 2010).

11 The index of municipality development in accordance with the Decree on Methodology for Determination of Municipal Development, OG RS, no.61/2009.

Cancer

Health inequalities that we observe in chronic noncommunicable diseases are also present in the field of **cancer.** Studies (for example, Kogevinas et al., 1997; Doll & Peto, 1996) have shown that people with low socioeconomic status, on average, smoke and drink more, eat less well, are more often infected with carcinogenic microorganisms, and are therefore more likely to get cancer than those with high socioeconomic status. Conversely, individuals with high socioeconomic status, on average, have less favourable reproductive[12] characteristics, and therefore develop more of the types of cancer that are associated with these factors (for example, breast cancer). Environmental risk factors, on average, do not vary between socioeconomic classes.

Cancer location	Other countries		Slovenia	
	Men	Women	Men	Women
Head and neck	↓	↓	↓	↔
Oesophagus	↓	↓	–	–
Stomach (without cardia)	↓	↓	↶	↶
Colon and rectum	↑	↑	↔	↔
Liver	↓	↓	–	–
Lung	↓	↓	↔	↔
Malignant melanoma	↑	↑	↔	↑
Breast	–	↑	–	↑
Cerviks		↓		↔
Ovary		↑		↔
Brain	↑	↔	↶	–

Legend:

↓	Higher incidence for socioeconomically deprived individuals;
↶	Higher incidence in socioeconomically weaker areas, but relationship with socioeconomic status has not been analytically proven;
↑	Higher incidence for socioeconomically privileged individuals;
↔	Socioeconomic status does not affect cancer incidence;
–	Analysis was not carried out due to insufficient number of patients.

Table 2.1. Overview results of foreign and domestic studies on the occurrence of cancer related to the patient socioeconomic status

Source: Kogevinas et al., 1997; Zadnik, 2005.

12 For example, late birth of the first child and smaller number of pregnancies are risk factors for certain types of cancer.

The Slovenian study into the influence of socioeconomic differences on cancer incidence in Slovenian municipalities (Zadnik, 2005) included all patients that were diagnosed in the years 1995–2002 with one of the types of cancer that were linked to with socioeconomic status in international studies (left-hand side of Table 2.1) (Kogevinas et al., 1997). From a number of indirect socioeconomic status indicators a deprivation index was calculated for each municipality, which was used together with data on patients from the Cancer Registry of Slovenia in a geographical analysis. The summary of the results is shown in the right-hand side of Table 2.1. More on the methods and data used to calculate the deprivation index is described in Annex 1 Methodology.

Figure 2.12a shows the poorer economic status of the eastern (especially north-eastern) part of the country. The economic deprivation of that part of Slovenia is associated with higher risk of head and neck cancer for men (Fig. 2.12b). The occurrence of head and neck cancer is predominantly explained by excessive drinking of alcohol and concurrent smoking (Boyle & Levine, 2008). A connection between the deprivation index and excessive drinking of alcohol was not proven in the study, while a pattern of greater consumption of alcohol among the materially poorer and less educated population is also seen in Slovenia.

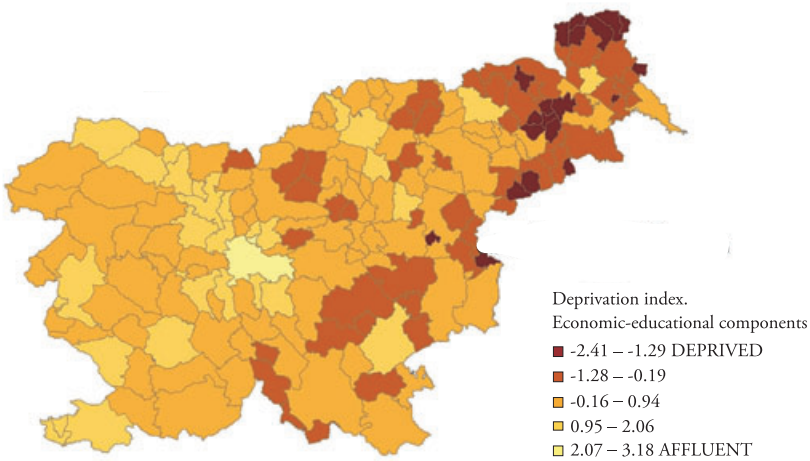

Fig. 2.12a. Deprivation index by Slovenian municipality

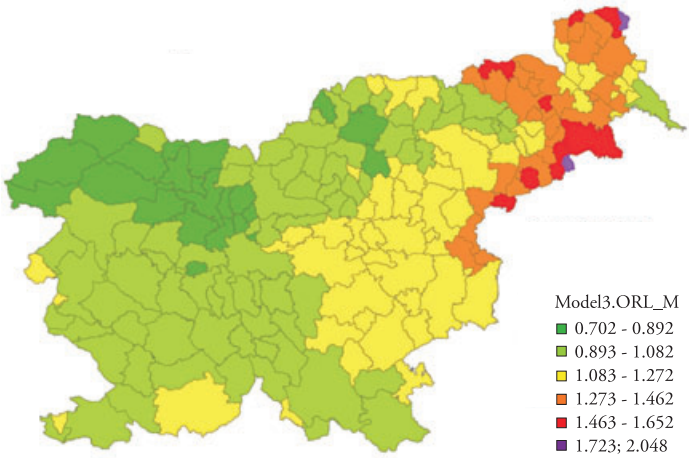

Fig. 2.12b. Head and neck cancer: modelled incidence in men by municipality, Slovenia, 1995–2002

By contrast, more women develop malignant melanoma and breast cancer in economically privileged regions of central and western Slovenia (Fig. 2.12c and Fig. 2.12d). Obviously, even in Slovenia the privileged class has undertaken higher risk patterns of behaviour (Ortiz, Goodwin & Freeman, 2005), with periodic intensive exposure to the sun and the associated higher risk of malignant melanoma. The higher risk of breast cancer in the privileged class can be associated by the later first pregnancy and birth and fewer children (Boyle & Levine, 2008).

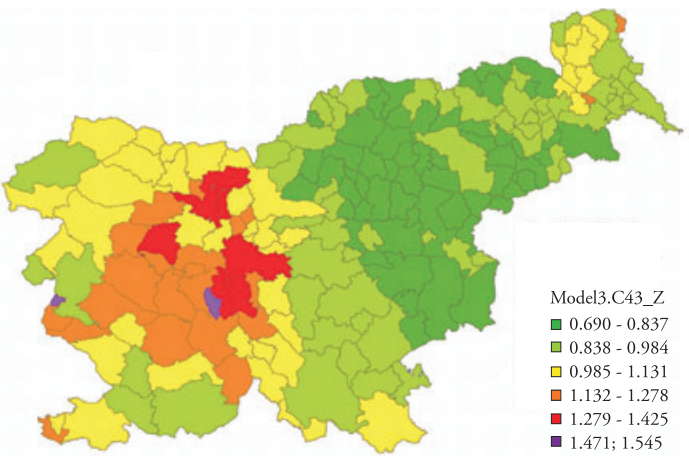

Fig. 2.12c. Malignant melanoma: modelled incidence in women by municipality, Slovenia, 1995–2002

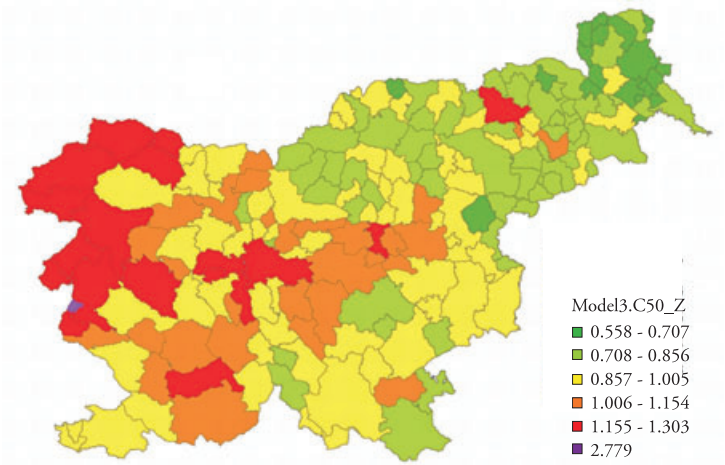

Fig. 2.12d. Breast cancer: modelled incidence in women by municipality, Slovenia, 1995–2002

Source (Figures 2.12a, 2.12b, 2.12c, 2.12d): Zadnik, 2005; SMARS

Based on the presented findings of the study in Slovenia, we cannot correlate types of cancer that are related to inadequate nutrition (colon and rectum) or to infection with carcinogenic microorganisms (stomach cancer, cervical cancer) with differences in the patient socioeconomic status, even though there is some evidence of this connection for some of those types of cancer (see Table 2.1). Interpreting the findings, we must be aware that the latent period for the occurrence of solid cancers is between 15 and 20 years. The cancer-causing risk factors examined in the study will have been in effect at the end of the 1970s and in the early 1980s.

Mental health

With the connection between socioeconomic status and mental health problems, it is difficult to say what are the causes and what are the consequences – is the low socioeconomic status due to mental disorders, or is the socioeconomic status the cause that increases the likelihood of the development of mental disorders? The assumption is that the causes and consequences vary according to the mental disorder in question (Miech et al., 1999). Socioeconomic factors that are most frequently associated with mental disorders are poor social relationships, unemployment, poor working conditions, economic difficulties, and others (Laaksonen et al., 2008; Singh-Manoux, Clarke & Marmot, 2002; Molarius et al., 2009).

The findings of the Slovenian survey data among the adult population show that in both genders there is a difference in the occurrence of depression in relation to education. The difference in occurence of **depression** for women with the lowest and the highest levels of education is greater than for men (Fig. 2.13). The results show that the incidence of depression is significantly associated with level of education in people aged 25–44 years

and 45–64 years. The connection is insignificant for the older population group (65–74 years) (CINDI Slovenia, 2008, see Annex 1: Methodology).

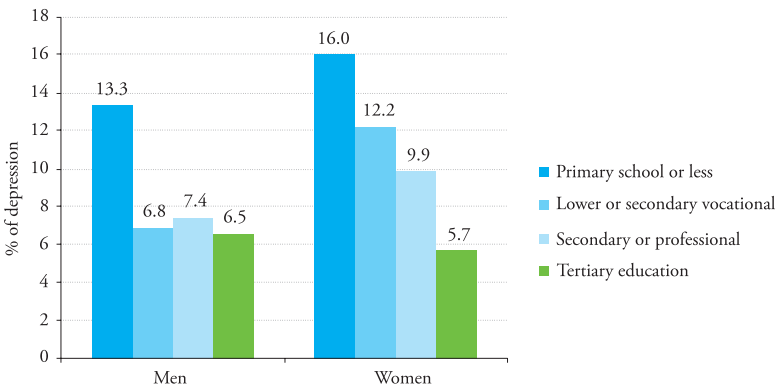

Fig. 2.13. Depression by gender relative to education in the age group 45–64 years, Slovenia, 2008

Source: CINDI Slovenia, 2008.

Note: The data shown relate to the condition that the respondents declared as having been diagnosed by a doctor.

Musculoskeletal problems

In Slovenia, musculoskeletal problems are the most frequently self-reported health problem: a source of pain and functional limitations, the first illness cause for days off work, and the most common cause of permanently reduced capacity for gainful employment (Kofol-Bric, 2010).

According to the surveys carried out, between half and three quarters of the Slovenian population faces a disease or cause of pain in the back, neck and joints. We analysed the group aged 40–59 years, in which musculoskeletal problems most often occur; it is also the age group in which we expect a reflection of the effects of socioeconomic determinants, over a longer period. The analysis showed that musculoskeletal problems are significantly more common in the less educated (Fig. 2.14), those with lower income per family member, and a lower self-assessed social status. Among people with primary school or less there is a 52% higher incidence of musculoskeletal problems (NIPH EHIS, 2007; see Annex 1 Methodology) and a 68% higher incidence of confirmed musculoskeletal diseases (CINDI Slovenia, 2008, see Annex 1 Methodology), compared with those with tertiary education.

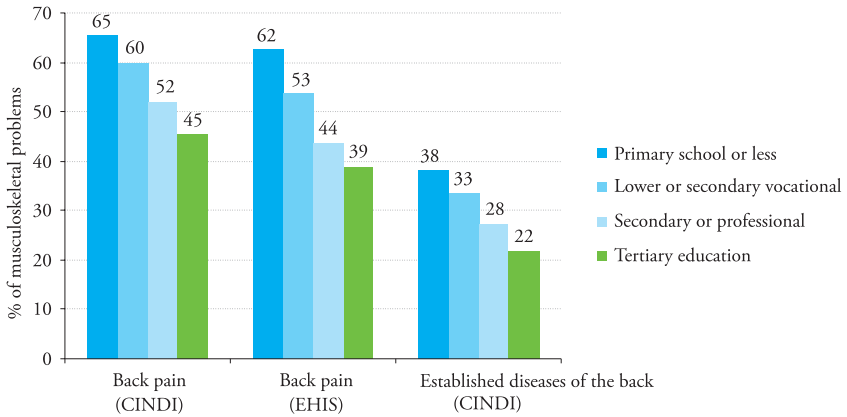

Fig. 2.14 Frequency of back problems in those aged 40–59 years relative to education, Slovenia, 2007/08

Source: CINDI Slovenia, 2008; NIPH EHIS, 2007.

Note: Data on back pain (CINDI and EHIS) indicate self-reported back-pain data, while the data on established diseases of the back indicate diseases declared by respondents as having been diagnosed by a doctor.

Higher occurrence of musculoskeletal problems and diseases in individuals with lower socioeconomic status is significantly associated with higher physical burdens at work (Punnett, 2006); psychosocial conditions at the workplace are also of great importance (Marmot, 1999). Both factors are directly related to education, income and social status. In both Slovenian surveys, the less educated also more frequently reported being exposed to difficult physical conditions at the workplace, compared to the more highly educated. The risk of back conditions for people who carry out heavy industrial and agricultural work is no different than that of individuals who perform lighter physical or service work, but the average risk in these two groups is 42% higher than for individuals who are engaged in office work and intellectual work. Data from both surveys also show that the higher risk of musculoskeletal diseases among the primary and vocationally educated can not only be attributed to exposure to difficult physical conditions at the workplace (NIPH EHIS, 2007) or to carrying out heavy physical work (CINDI Slovenia, 2008); the formation of musculoskeletal problems is also strongly influenced by other factors than just physical strain, which are bound to the socioeconomic status expressed in terms of formal education (Kaila-Kangas et al., 2006).

Researchers are examining the hypotheses that for less educated workers compared to more educated groups, musculoskeletal problems often occur in conjunction with mental health problems (Khlat & Chau, 2010). They also note that for the same musculoskeletal problems, rehabilitation and return to work are much more successful in the more highly educated groups (Carr & Klaber Moffet, 2005).

Oral health

Oral health is an integral part of general health. Findings show that social factors have an especially dominant impact on oral health (WHO, 2002). Good dental care is composed of several elements: regular brushing of teeth, regular visits to the dentist, proper diet, and the use of protective agents. The basic consequence of inadequate dental care is dental disease. The most frequent of such diseases include rotting teeth (caries) and disease of the gingiva (periodontal disease) that can lead to loss of teeth or the occurrence and worsening of other diseases (Zaletel-Kragelj, Fras & Maučec-Zakotnik, 2004).

According to data from 2001, the percentage of low dental care decreases significantly with increasing level of education. The ratio between the highest and lowest educational rank was 1:17 (Zaletel-Kragelj, Fras & Maučec-Zakotnik, 2004). Similar differences are seen in data on missing teeth from 2008. The risk of missing more than six teeth in individuals aged 25–44 years with primary-level education is 1.7 times higher than for individuals with vocational education; 3 times higher than for people with secondary education; and as much as 10 times higher than for those with tertiary education. Differences by education are also present in the other age groups, but the differences decrease with age (CINDI Slovenia, 2008; see Annex 1 Methodology).

HOW DO SOCIAL DETERMINANTS AFFECT HOW LONG WE LIVE?

Life expectancy

Life expectancy relative to education is an important indicator of socioeconomic differences in health. The report of the Statistical Office of the European Commission (Eurostat) found that at any age, people with lower education have the shortest life expectancy, which increases with increased education. Life expectancy, for each level of educational attainment, is longer for women than for men, but gender differences diminish with increased education, and the same is true for Slovenia. Data show that life expectancy in Slovenia in all observed age groups for men in the highest educational class is lower than for women in lowest educational class, which is true for only a few European countries (Fig. 2.15) (Corsini, 2010).

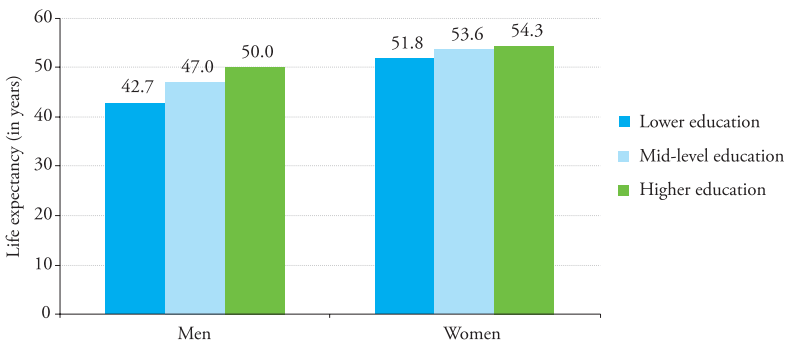

Fig. 2.15. Life expectancy at 30 relative to education and gender, Slovenia, 2008

Source: Corsini, 2010.

Notes: Lower education = primary school-level or less; Mid-level education = secondary school programmes that last 2–5 years; Higher education or tertiary education = college or higher, lasting 2–10 years.

Mortality

Lower socioeconomic status is associated higher mortality (Mackenbach et al., 2003; Carstairs, 1995). In recent years, mortality for all socioeconomic classes has been decreasing, yet it is interesting that the differences between the lower and higher socioeconomic status in different European countries have remained equal or have even increased (Mackenbach et al., 2003; Corsini, 2010).

When data on the socioeconomic status of an individual is not available, we use regional socioeconomic indicators. Studies indicate that underprivileged areas have poorer health indicators precisely because they have larger populations of the most vulnerable groups (Carstairs & Morris, 1989). Yet, we must be aware that socioeconomically disadvantaged individuals also live in other areas; therefore, action to reduce inequalities should be directed at disadvantaged individuals, disadvantaged groups, and deprived areas (Sloggett & Joshi, 1994).

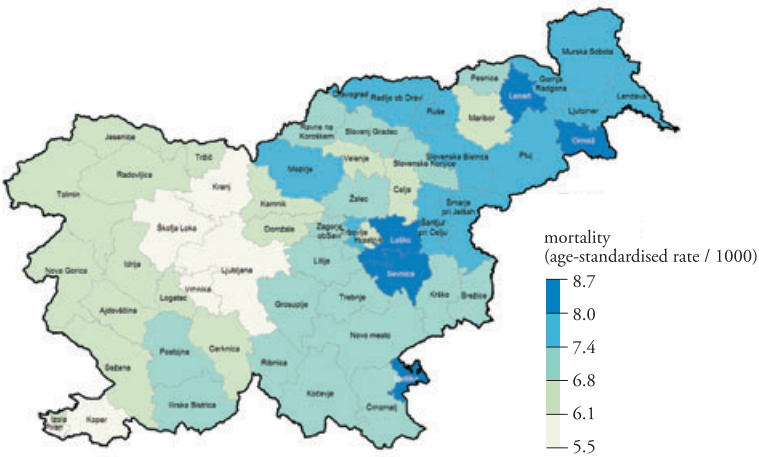

Fig. 2.16. Mortality by Slovenian administrative units, 2005–2009

Source: NIPH Database of deaths 2005-2009; SMARS.

Note: The age-standardized rate per 1000 inhabitants is shown.

Analysis of mortality in Slovenia has shown that there are significant differences in mortality between the socioeconomically more "at risk" group of municipalities and the socioeconomically less "at risk" group (Fig. 2.16) (NIPH Database of deaths, 2004–2008; see Annex 1 Methodology). In the analysis of overall mortality, the differences were significantly associated with all analysed socioeconomic indicators[13], except the employment rate. The greatest differences were revealed when analysing the income tax base per capita, the municipality development index, and the combined indicator (municipality development index and the number of recipients of financial social assistance). When both genders are viewed together, the greatest differences could be seen in premature mortality (that is, up to 64 years old); mortality was up to 60% higher in

13 Registered unemployment rate, employment rate, income tax base per capita, number of recipients of financial social assistance, municipality development index, combined indicator – municipality development index, and number of recipients of financial social assistance.

socioeconomically more "at risk" groups of municipalities. The smallest differences could be seen in mortality for those over 65 years of age, where differences were up to 30%.

It is notable that the difference in mortality is greater in men than in women, which is consistent with findings from other countries (Saurel-Cubizolles et al., 2009). When all age ranges are viewed together, the differences in the mortality rate among men in socioeconomically more "at risk" groups of municipalities were higher by 11–47% than in the socioeconomically less "at risk" groups of municipalities, depending on the socioeconomic indicator used. For women these differences ranged between 13% and 32% (Fig. 2.17). The biggest differences for men were found relating to premature mortality (up to 64 years old), whereby, in socioeconomically more "at risk" groups of municipalities, mortality rates were up to 19–78% higher than in the socioeconomically less "at risk" groups of municipalities. There were no statistically significant differences found between groups of municipalities in terms of premature mortality in women. For individuals older than 65 years, the differences for men between groups of municipalities ranged up to 40% and for women up to 30% (NIPH Database of deaths, 2004–2008).

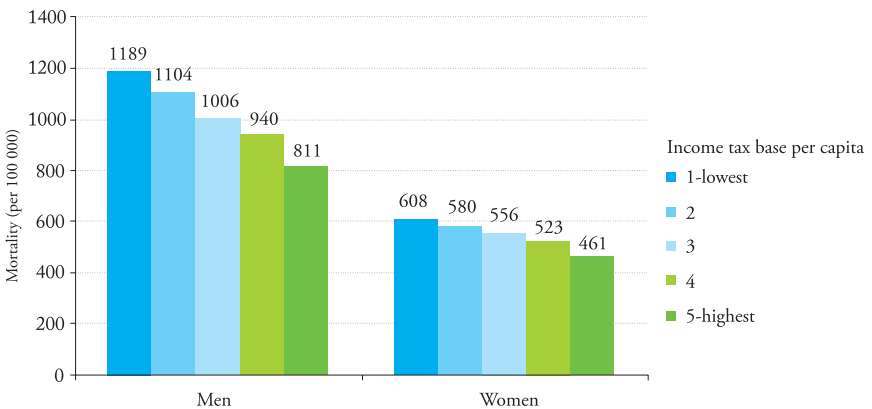

Fig. 2.17. Mortality by groups of municipalities relative to income tax base per capita, Slovenia, 2004–2008

Source: NIPH Database of deaths 2004-2008.

Notes: Age-standardized rates per 100 000 inhabitants are shown. Municipalities are divided into quintiles; Group 1 comprises municipalities with the lowest income tax base per capita. See Fig. 1.2.

For more effective action in reducing socioeconomic inequalities in mortality, the causes of death that contribute to most of these differences should be studied in more detail. It is necessary to remember that social inequalities in morbidity and mortality are associated with major risk factors for specific causes of death. Studies of inequalities in mortality are most frequently associated with differences in cardiovascular diseases,

notably ischaemic heart disease, the more common types of cancer, diabetes, chronic obstructive pulmonary disease, and with external causes (Marmot et al., 1984; Howard and et al., 2000; Wong et al., 2002; Huisman et al., 2005a), which are themselves assocciated with socioeconomic status. For example, findings suggest that in Europe deaths associated with smoking account for 22% of inequality among men and 6% among women, while deaths related to alcohol account for 11% in men and 6% in women (Mackenbach et al., 2008).

In Slovenia, there is no evidence of statistically significant differences in age-standardised mortality according to selected socioeconomic indicators for mortality due to ischaemic heart disease (for example, heart attacks).

In terms of mortality due to cerebrovascular disease (such as stroke, cerebral bleeding, etc.) significant differences can be observed in age-standardised mortality based on the municipality development index and the combination of the municipality development index and the percentage of recipients of financial social assistance. Mortality in the group of municipalities with low indicators of development is 1.9 times higher than in municipalities with higher indicators of development (NIPH Database of deaths, 2004–2008).

The consequences of hazardous and harmful alcohol consumption

According to chosen indicators of alcohol-related harm, Slovenia ranks above the EU Member States' average. Clear socioeconomic differences can be seen in terms of mortality from causes wholly attributable to alcohol[14] and from liver cirrhosis[15]. Inhabitants of municipalities with the lowest income tax base per capita have a higher risk of premature mortality (under 65 years) from causes wholly attributable to alcohol and from liver cirrhosis than inhabitants of municipalities with the highest income tax base per capita (Fig. 2.18). The differences are somewhat higher for women, as men have a 2.5 times greater risk, and women a 2.8 times greater risk of premature death due to causes wholly attributable to alcohol, along with a 3.1 times and 4.5 times greater risk, respectively, of premature death from liver cirrhosis if they live in a municipality with the lowest income tax base per capita. (NIPH Database of deaths, 2004–2008; see Annex 1 Methodology).

14 Diseases and poisonings directly caused by alcohol consumption. Alcohol-related injuries are not included.
15 Liver cirrhosis due to chronic viral hepatitis, metabolic and congenital cirrhosis are not included.

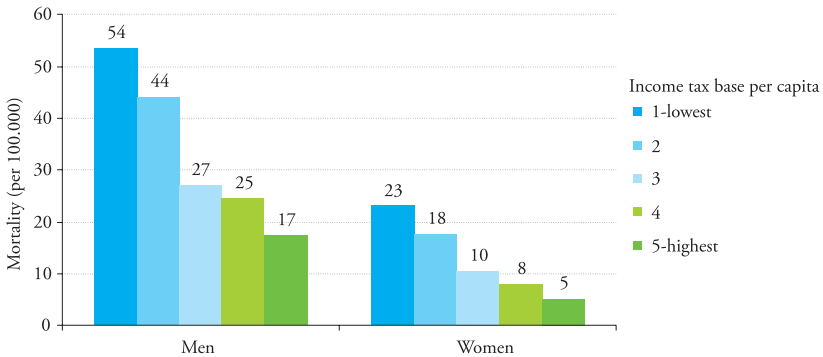

Fig. 2.18. Premature mortality (0–64 years) from liver cirrhosis in groups of municipalities relative to income tax base per capita by gender, Slovenia, 2004–2008

Source: NIPH Database of deaths 2004-2008.

Notes: Age-standardized rates for premature mortality per 100 000 inhabitants are shown; Municipalities are divided into quintiles relative to income tax base per capita; Group 1 comprises municipalities with the lowest income tax base per capita. See Fig. 1.2.

Studies in other countries also show that the consequences of hazardous and harmful alcohol consumption – such as dependence on alcohol and mortality from alcohol-attributable causes – are more frequent among the lower socioeconomic classes (Baumberg and Anderson, 2005; Schmidt et al., 2010). The higher frequency of these consequences among lower socioeconomic classes is likely the result of harsh economic and social conditions, but these consequences can also result in a downward slide of a person's socioeconomic status (for example, through downgrading at work, long-term sick leave, disability retirement and consequently lower income, or through fewer opportunities to develop youth potential). Some causes are also common to hazardous drinking and reduced chances for a successful career (such as the transfer of low socioeconomic status and drinking habits in families from generation to generation, or certain personality traits, behavioural problems or other difficult life circumstances) (Baumberg & Anderson, 2005; Mäkelä, 1999).

Inequalities in the consequences of hazardous and harmful alcohol consumption could be partially explained by the differences in drinking habits between socioeconomic classes; yet, the correlation of drinking habits with socioeconomic status is not simple, and the differences in drinking habits between socioeconomic classes are often not large enough to completely explain inequalities in alcohol-related mortality (Baumberg & Anderson, 2005). Lower socioeconomic classes more often abuse alcohol to cope with difficult economic and social situations as, due to lower education and lower income, they have more difficulty in accessing more appropriate ways of coping (Mäkelä, 1999; Baumberg & Anderson, 2005). It is possible that the greater sensitivity of lower socioeconomic

class to the consequences of excessive alcohol consumption (more dangerous drinking environments, as well as worse general health, nutritional status and living conditions) contributes to the inequalities in the consequences of harmful alcohol consumption (Mäkelä, 1999; Menke et al., 2003; Erskine et al., 2010).

Mortality from suicide

Slovenia is among the countries with high mortality due to suicide (Marušič & Zorko, 2003). Some deaths by suicide could have been prevented with timely and appropriate action. Suicide is of great importance because it is often young individuals who die this way. In Slovenia in 2006 suicide accounted for almost a fifth of all deaths in the age group under 40 years (Tomšič, Kovše et al., 2009). Among the most important demographic characteristics that increase the risk of suicide are age (risk increases with age), marital status (the single, divorced, and widowed are among the more vulnerable), education and employment (risk is higher among people with lower education and the unemployed) and male gender (Leskošek, 2001; Milčinski 1999).

In Slovenia, as in most countries of the world, the gender ratio (male : female) for suicide is 3.5 to 1 (Tomšič, Kovše et al., 2009). Based on data for the period 2004–2008, mortality due to suicide among men in the group of municipalities with the lowest income tax base per capita was almost 2 times higher than the mortality rate in municipalities with the highest income tax base per capita. In other words, for every one male suicide in the group of municipalities with a higher income tax base per capita, there are two in the group of municipalities with a lower base. This applies both to premature mortality (that is, mortality before the age of 65 years) and to mortality over 65 years. We did not find compelling differences between groups of municipalities according to the income tax base per capita for women (NIPH Database of deaths, 2004–2008; see Annex 1 Methodology). The available literature states that inequalities relative to socioeconomic status are even higher among suicide attempts than among suicides (Burrows, 2010).

Unintentional injuries

In Slovenia, unintentional injuries rank second among the causes for the loss of healthy life years (due to premature death and reduced ability and/or disability). Among the external causes responsible for the loss of healthy life years, traffic accidents and falls stand out (WHO, 2004). Socioeconomic status has a considerable effect on the risk of unintentional injuries through several mechanisms. Poor individuals and families are particularly susceptible to injuries because of their behaviour, exposure to risky situations and dangerous environment, poorer access to protective equipment and to high-quality medical and rehabilitative care (Ribas et al., 2006; Zwi, 2001).

Fatal injuries are more common in areas with lower socioeconomic status (Fig. 2.19, Fig. 2.20), just as for morbidity, significant differences between socioeconomic groups are seen. An inverse (that is, positive) correlation also exists between the socioeconomic status of youth and sports/recreational injuries, as young people from groups with higher socioeconomic status play sports more frequently and are therefore more likely to be injured.

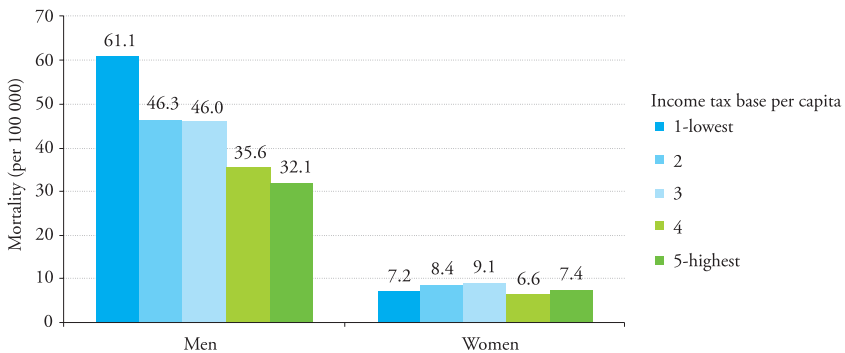

Fig. 2.19. Premature mortality (0–64 years) due to unintentional injuries by groups of municipalities relative to income tax base per capita and gender, Slovenia, 2004–2008

Source: NIPH Database of deaths 2004-2008.

Notes: Age-standardized rates are shown per 100 000; Municipalities are divided into quintiles relative to income tax base per capita; Group 1 comprises municipalities with the lowest income tax base per capita. See Fig. 1.2.

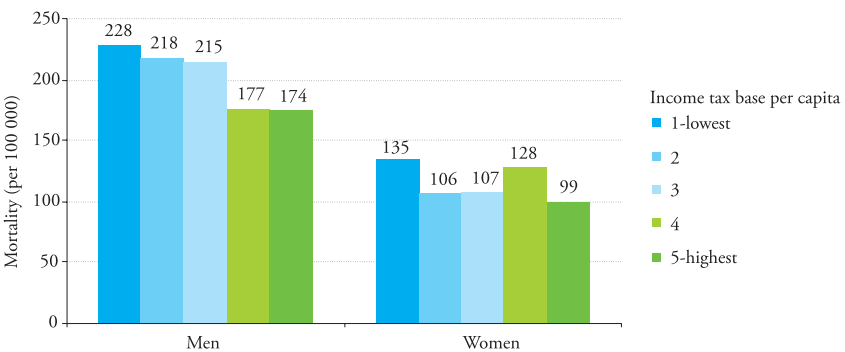

Fig. 2.20. Mortality of the aged (65 years or more) due to unintentional injuries by groups of municipalities relative to income tax base per capita and gender, Slovenia, 2004–2008

Source: NIPH Database of deaths 2004-2008.

Notes: Age-standardized rates are shown per 100 000; Municipalities are divided into quintiles relative to income tax base per capita; Group 1 comprises municipalities with the lowest income tax base per capita. See Fig. 1.2.

Socioeconomic **differences in mortality due to road traffic injuries** are only seen for men - in areas with the lowest socioeconomic status men have a 2.1 times greater risk of premature mortality from this cause and a 1.8 times greater risk of death at the age of over 64 years compared with men from areas with the highest socioeconomic status (NIPH Database of deaths, 2004–2008, see Annex 1 Methodology). Socioeconomic status of children and adolescents is associated with injuries in transport through factors related to parents or family, and the safety conditions in the area of residence (Hasselberg & Laflamme, 2004; Reimers & Laflamme, 2004; Potter et al., 2005). In Slovenia, the differences in mortality of children and adolescents (0–19 years) in road traffic between areas with poor and those with good socioeconomic status could not be proven. Yet, young people aged between 20 and 29 years in areas with the lowest income tax base per capita have a 2.2 times greater risk of fatal injury in road traffic than those from the highest income tax base per capita (NIPH Database of deaths, 2004–2008). The most important risk factors for road traffic injuries are also associated with socioeconomic status. In Slovenia, adults with higher education use a safety belt in the car more often than those with primary and vocational education (CINDI Slovenia, 2008; see Annex 1 Methodology). In addition, mothers with a low level of education would be twice as likely to incorrectly (without using child car seat) drive their infant home from the maternity hospital, as compared to the more highly educated mothers (Rok-Simon, 2004).

Injuries due to falls for elderly people and children occur mainly at home and most are associated with poor design and maintenance of living quarters and recreational areas, especially in poorer areas and in cheaper rented accommodation, in which people from lower socioeconomic classes live (Kannus et al., 1999; ENHIS, 2007). In Slovenia, mortality due to falls is associated with poor socioeconomic status of the area of residence only with the elderly. In areas with the lowest socioeconomic status, the risk of fatal injury due to falling is 1.3 times greater for those aged over 65 years than in areas with the highest socioeconomic status. The differences are statistically significant for both men and women (NIPH Database of deaths, 2004–2008).

DO WE HAVE EQUAL ACCESS TO HEALTH SERVICES AND DO WE ACTUALLY USE THEM EQUALY?

The impact of socioeconomic determinants on access to health care is complex and is a reflection of various factors such as (un)equal access, both financial and physical (geographic, time etc.), and (in)equality in the use of services, which reflects in (in) equality in health outcomes. Studies in other countries indicate that social security and a universal public health system are essential but not sufficient conditions for reducing health inequalities (Mackenbach et al., 2008; Strand et al., 2010). Part of health inequality is also linked with access to health care (Mackenbach et al., 2008). Despite the universal health care systems in Europe, there are significant differences in the usage of health services according to the socioeconomic status of an individual (Hanratty, Zhang & Whitehead, 2007). In addition to financial and geographical barriers, the major reasons for the low level of use of health services by the less affluent are cultural and information barriers (lack of familiarity with the way the health system works) and a lack of initiative (Couffinhal et al., 2005).

The availability and actual use of health services are also expected to be affected by the distribution of health costs between public and private funds. Inequality is greater in countries in which the percentage of direct payments is larger (Or et al., 2008). It has also been noticed that in Slovenia patients are increasingly paying out-of-pocket to access health care services (Zver, 2010). In Slovenia in 2008, private funding as a percentage of total health expenditure amounted to 28.1% (SORS, 2010), which is above the EU average (23.4% in 2008 (WHO Regional Office for Europe, 2010)) and exceeds the limit of 25% that some Slovenian authors set as an informal yet still acceptable level (Albreht & Klazinga, 2009). In the period 2000–2008, among total health expenditures, direct household expenditure increased the most (5.5% per year), to the effect that household expenditure as a percentage of total health expenditure in 2008 amounted to 12.7% (11.5% in 2000) and is already higher than the percentage of expenditures from voluntary health insurance (12.4%). In comparison with EU countries (16.4% (WHO Regional Office for Europe, 2010)) the percentage of out-of-pocket expenditure is still not high, as a result of the Slovenian system of supplementary health insurance, from which the differences up to the full value of health services are covered. Recently, the ratio of out-of-pocket payments as a percentage of the final household consumption has also been used as an indicator which reflects the aggregate impact of out-of-pocket expenditure by households. In Slovenia in 2008 this indicator amounted to 2.0% (1.7% in 2000), which – when compared with selected Organisation for Economic Co-operation and Development (OECD) countries – is not large (see Fig. 2.21); yet, despite the system of supplementary health insurance, it is already close to the level of countries that do not have such private insurance arrangements.

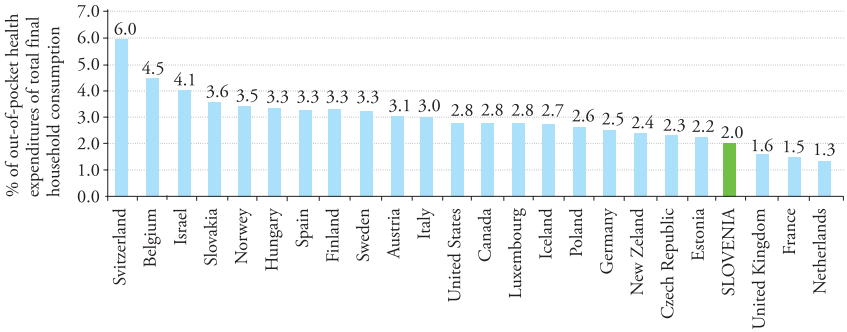

Fig. 2.21. Out-of-pocket health expenditures as a % of total final household consumption, Slovenia and OECD countries, 2008

Source: OECD, 2010; for Slovenia SORS, 2010.

Note: Data according to the System of Health Accounts methodology.

According to the national health accounts data (NHA) (SORS, 2010) in 2008, average out-of-pocket expenses amounted to €194, not including the cost of supplementary insurance.[16] According to the Household budget survey data (SORS - SI-STAT, 2010) in 2008, the percentage of health expenditures was the largest burden for households with the lowest incomes, which used 2.8% of all expenditures for health, while the more affluent households used 1.5%. An additional concern is raised by the fact that it is precisely for those households with the lowest income that the share of health expenditures has increased in the previous years (from 1.5% in 2005 to 2.8% in 2008). Thus, financial access to health services and goods has decreased for the households with the lowest incomes, which can further exacerbate health inequalities relative to socioeconomic status.

According to NHA data, the greatest shares of total out-of-pocket expenditures in 2008 were for medicines (23%), therapeutic appliances (20%), various services of other medical workers (physiotherapy) and alternative medicine (17%), dental services (14%), and outpatient specialised health care (9%). In the 2003–2008 period, out-of-pocket expenses increased the most for outpatient specialised health care, rehabilitation, long-term health care, diagnostic imaging, and for diagnostics and services in the field of primary care. Despite the fact that average direct payments are not high, the overall surcharge on a complex treatment can be a relatively large sum (Albreht et al., 2009). This area has not been studied and objectively quantified, but it is obvious that surcharges could theoretically reach several thousand euros per hospitalization. This is

16 In 2008 the lowest premium for supplementary insurance was offered by Vzajemna d.d. and amounted to €261 annually. From 1 January 2009 the socially most vulnerable were exempted from paying the premium for supplementary insurance.

particularly the case for services for which the surcharges are high, such as rehabilitation and physiotherapy, which are also relatively lengthy healing processes.

Health systems that have well-organized primary care should be reducing differences in the use of health services (Starfield et al., 2005). The impact of geographical accessibility is of great importance for lower socioeconomic classes (Grubaugh & Santerre, 1994; Or, Wang & Jamison, 2005; Place, 1997; Or, Jusot & Yilmaz, 2008). The use of primary-level care is relatively evenly spread across socioeconomic classes in most European countries (Van Doorslaer, Masseria & Koolman 2005; Or, Jusot & Yilmaz, 2008), just as is the case in Slovenia (NIPH EHIS, 2007; see Annex 1 Methodology).

Open access to primary health care is provided to all insured individuals in Slovenia, both geographically and economically. Open access means that first contact with a medical professional on primary level is direct, without referral, and at no additional cost to the patient. This type of "gatekeeping"[17] health system, as is the case in Slovenia, should also give rise to fewer inequalities, as the doctors at the primary care level should be able to better recognize needs, provide easier access and better guidance through the patient's care pathway, especially as regards people with low socioeconomic status (Or, Jusot & Yilmaz, 2008). Survey and research data, in the collection of which target groups were used (for example, The European patient of the future (Coulter & Magee, 2003)), show that patients are satisfied both with access to a selected personal physician, as well as with the concept of a selected personal physician itself.

There are significant differences between regions in Slovenia, as there is an inadequate distribution in the number of people per team in primary health care in some of the more remote rural areas, in which there can be a lack of doctors (Albreht et al., 2009) and in which the workload of doctors is greater. Also a lack of availability of high-speed services is measured as being inferior to urban centres by up to 40%. This is largely due to the lack of an appropriate policy for granting concessions. Problems are reflected in the provision of certain health services, particularly those that are preventive, and also physiotherapy, and "on duty" services at the primary care level. Related to this is the pressing issue of the continued operation of primary health care centres, as they are known now, which in some areas are not able to provide comprehensive care for the population (Zver, 2010).

Most public-opinion surveys in Slovenia ascertain that **dental care** is as important as other types of medical care. According to Slovenian Public Opinion Survey findings, as well as the European health questionnaire, the population of Slovenia showed considerable dissatisfaction regarding access to dental care, despite dental care being

17 Access to the secondary level of health care is in most cases conditional upon referral by a physician at the primary care level – the so-called "gatekeeper".

among the services available at the primary care level. Dentistry for children and adolescents is fully covered by the mandatory insurance, while for adults most cases requiring treatment (in accordance with the provisions of the Health Care and Health Insurance Act (HCHIA)) carry associated surcharges, which range between 10% and 60% of the total cost of treatment (Albreht et al., 2009). There is also a large percentage of private dentistry. In 2008, according to the Medical Chamber, the dentistry field comprised 48.6% individuals taking up private dental care with concessions, and 11.8% taking up completely private care, using exclusively services paid for out of pocket (ZZS, 2010). Dental services for adults is the only area at the primary level that, due to the lack of dentists, sometimes has very long waiting times (1–3 years) (Albreht et al., 2009).

Information on visits to a dentist shows that the probability that a person has been at least once to the dentist in the past 12 months was higher for the more highly educated population. The greatest differences are reflected in the age group 65–74 years, in which people with tertiary education were 60% more likely to have visited a dentist at least once in the past year than those with primary school-level education (CINDI Slovenia, 2008; see Annex 1 Methodology). Differences in the frequency of visits could result from differences in behavioural patterns (that is, the level of caring for one's teeth), but are also likely to be influenced by the impact of the financial burden associated with dental care.

At the secondary care level, there are waiting lists in Slovenia for a number of interventions and procedures, which constitute an obstacle in terms of actual access to these services. The shortening of these waiting times is typically achieved through the delivery of additional funds into the system, as was the case for additional resources for cataract surgery and open heart surgery between 2003 and 2008. Due to financial constraints this was not possible in 2009, but with the intention of increasing access to selected health services and reducing waiting times, the Health Insurance Institute of Slovenia (HIIS) has issued for the first time a national invitation to tender for selected programmes. At the same time, a high percentage of prospectively planned programs have been maintained, especially for services with long waiting lists; these reached 30% (32% in 2008) in acute hospital care. According to the HIIS data, in 2009 waiting times were decreased for 14 programmes, but increased for 13 (other) programmes. For several years, waiting times have been the longest in orthodontics (25 months for braces in 2009), orthopaedics (19 months for knee or ankle endoprosthesis) and dental prosthetics (16 months), while in most other fields of health services at the secondary care level, waiting times in 2009 were no more than 6 months (ZZZS, 2010). The Ministry of Health in accordance with the Act on Patients Rights[18] and the Rules on waiting times for individual health services[19] identified 6 months as an acceptable

18 Official Gazette, no.15/08.
19 Official Gazette, no.91/08.

waiting time, if there is no urgency. Additional insurance and direct payments are becoming popular solutions for shortening waiting times (Albreht et al., 2009), which are likely to generate further differences in access to health care based on socioeconomic status. Unfortunately, the available data were not suitable for analysis in this context.

Data from existing studies do not provide complete information on access to health services. In general, the system's design protects the first contact with health care, so that no additional payments are required for entry into the system, thereby formally providing economic equity of access. Physical or geographical access has become more difficult to provide because of the lack of doctors, dentists and nurses in Slovenia. In such circumstances it is more difficult to provide staff coverage, especially for the less attractive working positions and geographic areas. Therefore, it would be reasonable to monitor more closely incomplete teams, along with personnel competency. It would also be worthwhile to carry out a survey on out of pocket expenditures that are becoming increasingly significant.

References and resources

Albreht T, Klazinga N (2009). Privatisation of health care in Slovenia in the period 1992–2008. Health Policy, 90:262–269.

Albreht T et al. (2009). Slovenia: health system review. Health Systems in Transition. 2009; 11(3):1–168.

Artnik B et al. (2006). Premature mortality in Slovenia in relation to selected biological, socioeconomic, and geographical determinants. CMJ, 47(1):103–113.

Baumberg B, Anderson P (2005). Alcohol in Europe. Report for European Commission. London, Cambridge, Institute of Alcohol Studies.

Bloomfield K et al. (2006). Social inequalities in alcohol consumption and alcohol-related problems in the study countries of the EU concerted action 'gender, culture and alcohol problems: a multi-national study'. Alcohol and Alcoholism, 41(1):i26–i36.

Bloomfield K et al. (2008). Socio-demographic correlates of alcohol consumption in the Danish general population. Scand J Public Health, 36(6):580–588.

Boyle P, Levine B, eds. (2008). World cancer report 2008. Geneva: World Health Organization, International Agency for Research on Cancer.

Brown AF et al. (2004). Socioeconomic position and health among persons with diabetes mellitus: a conceptual framework and review of the literature. Epidemiol Rev, 26:63–77.

Brunner E et al. (1999). When does cardiovascular risk start? Past and present socioeconomic circumstances and risk factors in adulthood. J Epidemiol Community Health, 53:757–764.

Burrows S et al. (2010). Socioeconomic inequalities in suicide attempts and suicide mortality in Québec, Canada, 1990–2005. Public Health, 124(2):78–85.

Carr J, Klaber Moffett J (2005). Review paper: the impact of social deprivation on chronic back pain outcomes. Chronic Illn, 1:121–129.

Carstairs V (1995). Deprivation indices: their interpretation and use in relation to health. J Epidemiol Community Health, 49(Suppl 2):3–8.

Carstairs V, Morris R (1989). Deprivation and mortality: an alternative to social class? Comm Med, 11:210–219.

Chaturvedi N, Jarrett J, Shipley MJ, Fuller JH (1998). Socioeconomic gradient in morbidity and mortality in people with diabetes: cohort study findings from the Whitehall study and the WHO multinational study of vascular disease in diabetes. BMJ 316(7125):100-105.

CINDI Slovenia (2008). Dejavniki tveganja za nenealezljive bolezni pri odraslih prebivalcih Slovenije. [offline database]. Ljubljana, National Institute of Public Health.

Conen D et al. (2009). Socioeconomic status, blood pressure progression, and incident hypertension in a prospective cohort of female health professionals. Eur Heart J, 30:1378–1384.

Connolly V et al. (2000). Diabetes prevalence and socioeconomic status: a population-based study showing increased prevalence of type 2 diabetes mellitus in deprived areas. J Epidemiol Community Health, 54(3):173–177.

Corsini V (2010). Highly educated men and women likely to live longer. Life expectancy by educational attainment. Brussels, Statistical Office of the European Communities (Eurostat Statistics in focus, 24/2010).

Couffinhal A et al. (2005). Policies for reducing inequalities in health, what role can the health system play? A European perspective. Part I: Determinants of social inequalities in health and the role of the healthcare system. Issues in health economics IRDES, 92.

Coulter A, Magee H, ed. (2003). The European patient of the future. Philadelphia, PA, Open University Press.

Dahl E (1994). Social inequalities in ill-health: the significance of occupational position, education, and income results from a Norwegian survey. Sociol Health Illn, 16:644–667.

Dalstra JAA et al. (2005). Socioeconomic differences in the prevalence of common chronic diseases: an overview of eight European countries. Int J Epid, 34(2):316–326.

Deans KA et al. (2009). Differences in atherosclerosis according to area level socioeconomic deprivation: cross sectional, population based study. BMJ, 339:b4170.

Doll R, Peto R (1996). Epidemiology of cancer. In: Weatherall DJ, Ledingham JGG, Warell DA, eds. Oxford textbook of medicine. 3rd ed. New York, Oxford University Press: 197–222.

Dragano N et al. (2007). Neighbourhood socioeconomic status and cardiovascular risk factors: a multilevel analysis of nine cities in the Czech Republic and Germany. BMC Public Health, 7:255 (http://www.biomedcentral.com/1471-2458/7/255, accessed 10 August 2010).

ENHIS (2007). Comparative assessment of policies on housing safety in 18 countries of the European Union. Copenhagen, WHO Regional Office for Europe.

EOHSP (2009). European Observatory on Health Systems and Policies. Health in the European Union. Trends and Analysis. Copenhagen, Denmark: World Health Organization.

Erskine S et al. (2010). Socioeconomic deprivation, urban-rural location and alcohol-related mortality in England and Wales. BMC Public Health, 10:99.

EUGLOREH (2007). Global report on the health status in European Union. The status of health in the European Union: towards a healthier Europe. Rome, EU Public Health Programme Project (http://euglorehcd.eulogos.it/DEFAULT.HTM, accessed 9 March 2010).

Faireley L, Leyland AH (2006). Social class inequalities in perinatal outcomes: Scotland 1980–2000. J Epidemiol Community Health, 60:31–36.

Fisher S (2008). Social inequalities in maternal and perinatal mortality: a summary of research. New Digest, 44:18–26.

Freeman HP (2004). Poverty, culture, and social injustice: determinants of cancer disparities. CA Cancer J Clin, 54:72–77.

Gabrijelčič Blenkuš M et al. (2009) Prehrambene navade odraslih prebivalcev Slovenije z vidika varovanja zdravja. Ljubljana, Pedagoška fakulteta.

Gissler M et al. (2003). Register-based monitoring shows decreasing socioeconomic differences in Finnish perinatal health. J Epidemiol Community Health, 57:433–439.

Grubaugh SG, Santerre RE (1994). Comparing the performance of health care systems: an alternative approach. South Econ J, 60(4):1030–1042.

Hanratty B, Zhang T, Whitehead M (2007). How close have universal health systems come to achieving equity in use of curative services? A systematic review. Int J Health Serv, 37(1):89–109.

Hasselberg M, Laflamme L (2004). Children at risk in traffic: improvement potentials in the Swedish context. Acta Paediatr, 93:113–119.

HBSC (2006). Health Behaviour in School-aged Children [offline database]. Ljubljana, National Institute of Public Health.

Howard G et al. (2000). Race, socioeconomic status, and cause-specific mortality. Ann Epidemiol, 10:214–223.

Huisman M in sod. (2005a). Educational inequalities in cause-specific mortality in middle-aged and older men and women in eight western European populations. Lancet, 365:493-500.

Huisman M, Kunst AE, Mackenbach JP (2005b). Educational inequalities in smoking among men and women aged 16 years and older in 11 European countries. Tob Control, 14:106–113.

Institute of macroeconomic analysis and development (2010). Development report 2010. Development indicators of Slovenia. Ljubljana, Statistical Office of the Republic of Slovenia http://www.umar.gov.si/fileadmin/user_upload/publikacije/pr/2010/por_s2010.pdf, accessed 3 January 2011).

Kaila-Kangas L et al. (2006). How consistently distributed are the socioeconomic differences in severe back morbidity by age and gender? A population based study of hospitalisation among Finnish employees. Occup Environ Med, 63:278–282.

Kannus P et al. (1999). Fall-induced injuries and deaths among older adults. JAMA, 281(20):1895–1899.

Khlat M, Chau N (2010). Social disparities in musculoskeletal disorders and associated mental malaise: findings from a population-based survey in France. Scand J Public Health, 38(5):495–501.

Kivimäki M et al. (2007). Socioeconomic position, co-occurrence of behaviour-related risk factors, and coronary heart disease: the Finnish public sector study. Am J Public Health, 97(5):874–879.

Koch V (1997). Nutritional habits of the adult population of Slovenia from the aspect of the health protection [Doctoral thesis]. Ljubljana, University of Ljubljana Biotechnical Faculty Department of Food Science.

Kofol-Bric T (2010). Skeletno-mišične bolezni. In: Hočevar Grom A et al., eds. Zdravje v Sloveniji. Ljubljana, National Institute of Public Health.

Kogevinas M et al. (1997). Social inequalities and cancer. Lyon, International Agency for Research on Cancer.

Krek M et al. (2010). Nacionalno poročilo 2009 o stanju na področju prepovedanih drog v Republiki Sloveniji. Ljubljana, Inštitut za varovanje zdravja RS.

Laaksonen E et al. (2008). Association of multiple socioeconomic circumstances with physical functioning among Finnish and British employees. Eur J Public Health, 19:38–45.

Lawlor DA, Ebrahim S, Davey Smith G (2005). Adverse socioeconomic position across the lifecourse increases coronary heart disease risk cumulatively: findings from the British women's heart and health study. J Epidemiol Community Health, 59:785–793.

Leskošek F (2001). Sociological aspects of suicide in Slovenia. Health care, 40:41–50.

Loucks EB et al. (2009). Life-course socioeconomic position and incidence of coronary heart disease: the Framingham Offspring Study. Am J Epidemiol, 169:829–836.

Lynch I, Kaplan G (2000). Socioeconomic position. In: Berkman L, Kawachi I, eds. Social epidemiology. New York, Oxford University Press: 13–35.

Mackenbach JP (2006). The origins of human disease: a short story on "where" diseases come from. J Epidemiol Community Health, 60:81–86.

Mackenbach JP et al. (2003). Widening socioeconomic inequalities in mortality in six western European countries. Int J Epidemiol, 32(5):830–837.

Mackenbach JP et al. (2004). Inequalities in lung cancer mortality by the educational level in 10 European populations. Eur J Cancer, 40(1):126–135.

Mackenbach JP et al. (2008). Socioeconomic inequalities in health in 22 European countries. New Engl J Med, 358(23):2468–2481.

Mäkelä P (1999). Alcohol-related mortality as a function of socioeconomic status. Addiction, 94(6):867–886.

Marmot MG (1999). Importance of the psychosocial environment in epidemiologic studies. Scand J Work Environ Health, 25:49–53.

Marmot MG, Shipley MJ, Rose G (1984). Inequalities in death – specific explanations of a general pattern? Lancet, 1:1003–1006.

Martin-Moreno JM, Magnusson G (2008). The causes of cancer and policies for prevention. In: Coleman MP et al. eds. Responding to the challenge of cancer in Europe. Ljubljana, Institute of Public Health of the Republic of Slovenia.

Marušič A, Zorko M (2003). Slovenian suicides as seen through time and space. In Marušič VA, Roškar S, ed. Slovenia with or without suicide. Ljubljana, DZS: 10–20.

Menke R et al. (2003). Report on socioeconomic differences in health indicators in Europe: health inequalities in Europe and the situation of disadvantaged groups. Bilthoven, National Institute for Public Health and the Environment (RIVM).

Menvielle G et al. (2009). The role of smoking and diet in explaining educational inequalities in lung cancer incidence. J Natl Cancer Inst, 101:321–130.

Miech RA et al. (1999). Low socioeconomic status and mental disorders: a longitudinal study of selection and causation and selection and causation during young adulthood. Am J Sociol, 104:1096–1131.

Milčinski L (1999). Samomorilno vedenje. In: Tomori M, Ziherl S, eds. Psihiatrija. Ljubljana, Literapicta: 361–375.

Ministry of Health (2010). Nacionalni program za obvladovanje sladkorne bolezni – Strategija razvoja 2010–2020. Ljubljana, Ministry of Health of the Republic of Slovenia.

Molarius A et al. (2009). Mental health symptoms in relation to socioeconomic conditions and life-style factors – a populational based study in Sweden. BMC Public Health, 9:302.

Moravec Berger D, Zupanič T (2008). Epidemiologija sladkorne bolezni v Sloveniji: prevalenca sladkorne bolezni v Sloveniji. In: Spremenimo diabetes /1.nacionalna konferenca o diabetesu, zbornik. Ljubljana, Zavod za izobraževanje o diabetesu.

NIPH Database of deaths (2004–2008). Database of deaths [offline database]. Ljubljana, National Institute of Public Health.

NIPH EHIS (2007). European Health Interview Survey [offline database]. Ljubljana, National Institute of Public Health.

NIPH PIS (2004–2008). Perinatal information system [offline database]. Ljubljana, National Institute of Public Health.

OECD (2009). The obesity epidemic: analysis of past and projected future trends in selected OECD countries. Health Working Papers No. 45 (http://www.oecd.org/els/health/technicalpapers, accessed 25 November 2010).

OECD (2010). OECD health data. Paris, Organisation for Economic Co-operation and Development (http://www.oecd.org/document/30/0,3343,en_2649_37407_12968734_1_1_1_37407,00.html, accessed 25 October 2010).

Official Gazette of the Republic of Slovenia (2006). Health care and health insurance act (HCHIA). Official Gazette, 72/06. (http://zakonodaja.gov.si/rpsi/r03/predpis_ZAKO213.html, accessed 6 January 2011).

Official Gazette of the Republic of Slovenia (2008a). Pravilnik o čakalnih dobah za posamezne zdravstvene storitve in o vodenju čakalnih seznamov 2008. Uradni list RS 91/08, 63/10.

Official Gazette of the Republic of Slovenia (2008b). Zakon o pacientovih pravicah 2008. Uradni list RS, 15/08.

Official Gazette of the Republic of Slovenia (2008c). Zakon o spremembah in dopolnitvah Zakona o financiranju občin (ZFO-1A); 57. Ljubljana, Uradini list RS.

Official Gazette of the Republic of Slovenia (2009). Uredba o metodologiji za določitev razvitosti občin 2009. Uradni list RS, 61/09.

Or Z, Jusot F, Yilmaz E (2008). Impact of health care system on socioeconomic inequalities in doctor use for the European Union working group on socioeconomic inequalities in health. Working paper. Paris, Istitut de recherche et documentation en economie de la sante.

Or Z, Wang J, Jamison D (2005). International differences in the impact of doctors on health: a multilevel analysis of OECD countries. J Health Econ, 24:531–560.

Ortiz CA, Goodwin JS, Freeman JL (2005). The effect of socioeconomic factors on incidence, stage at diagnosis and survival of coetaneous melanoma. Med Sci Monit, 11:RA163–172.

Outpatient prescription drugs database (2008) [offline database]. Ljubljana, National Institute of Public Health.

Picciotto S et al. (2006). Associations of area-based deprivation status and individual educational attainment with incidence, treatment, and prognosis of first coronary event in Rome, Italy. J Epidemiol Community Health, 60:37–43.

Pilote L et al. (2007). A comprehensive view of sex-specific issues related to cardiovascular disease. CMAJ, 176(6 Suppl.):1–44.

Place M (1997). The relationship between concentration, patient accessibility and utilisation of services. York, University of York Centre for Health Economics, York Health Economics Consortium, NHS Centre for Reviews & Dissemination.

Potter BK et al. (2005). Socioeconomic status and non-fatal injuries among Canadian adolescents: variations across SES and injury measures. BMC Public Health, 5: 132.

Punnett L (2006). Socioeconomic differences in severe back morbidity. Occup Environ Med, 63;369–370.

Reimers A, Laflamme L (2004). Neighbourhood social composition and injury risks among pre-adolescent and adolescent boys and girls. A study in Stockholm Metropolitan. Int J Adolesc Med Health, 16:215–227.

Ribas R de C, Tymchuk AJ, Ribas AFP (2006). Brazilian mothers' knowledge about home dangers and safety precautions: an initial evaluation. Soc Sci Med, 63:1879–1888.

Rok-Simon M (2004). Stališča staršev novorojenčkov glede uporabe avtomobilskega sedeža. Health Care, 43(1):19–28.

Saurel-Cubizolles MJ et al. (2009). Social inequalities in mortality by cause among men and women in France. J Epidemiol Community Health. 63(3):197–202.

Schmidt LA et al. (2010). Alcohol: equity and social determinants. In: Blas E, Kurup AS, eds. Equity, social determinants and public health programmes. Geneva, World Health Organization: 11–29.

Schrijvers C, Kunst AE, Bovendeur I (2008). Age-standardized prevalence ratio of diabetes by educational level in men and women, 30–64 years of age in selected countries. In: EUPHIX, Euphocus. Bilthoven, RIVM (http://www.euphix.org/object_document/o5678n29797.html, accessed 3 January 2011).

Šelb-Šemerl J. Bolezni srca in žilja. In: Hočevar Grom A et al., eds. Zdravje v Sloveniji. Ljubljana, National Institute of Public Health.

Singh-Manoux A, Clarke P, Marmot M (2002). Multiple measures of socioeconomic position and psychosocial health: proximal and distal measures. Int J Epidemiol, 31:1192–1199.

Sloggett A, Joshi H (1994). Higher mortality in deprived areas: community or personal disadvantage? BMJ, 309:1470–1474.

Starfield B, Shi L, Macinko J (2005). Contribution of primary care to health systems and health. Milbank Q, 83(3):457–502.

Strand BH et al. (2010). Education inequalities in mortality over four decades in Norway: prospective study of middle-aged men and women followed for cause-specific mortality, 1960–2000. BMJ, 340:654.

SORS (2010). Izdatki in viri financiranja za zdravstvo 2003–2008. Objava 29 October. Ljubliana, Statistical Office of the Republic of Slovenia (http://www.stat.si/novica_prikazi.aspx?id=3498, accessed 3 January 2011).

SORS, SI-STAT (2010). Anketa o porabi v gospodinjstvih 2000–2008. Objava 5 October. Ljubliana, Statistical Office of the Republic of Slovenia. (http://www.stat.si/novica_prikazi.aspx?id=3467, accessed 3 January 2011).

Tomšič S et al. (2009). Duševno zdravje v Sloveniji. In: Jeriček-Klanšček H et al., eds. Duševno zdravje v Sloveniji. Ljubljana, National Institute of Public Health: 71–75.

Unwin N. et al. (1996). The relationship between cardiovascular risk factors and socio-economic status in people with diabetes. Diabetic Medicine 13(1):72-79.

Van der Meer JB, Mackenbach JP (1999). The care and course of diabetes: differences according to level of education. Health Policy, 46(2):127–141.

Van Doorslaer E, Masseria C, Koolman X (2005). Inequalities in access to medical care by income in developed countries. CMAJ, 174 (2): doi:10.1503/cmaj.050584.

Wadsworth M, Butterworth S (2006). Early life. In: Marmot M, Wilkinson RG. Social Determinants of Health. Oxford, Oxford University Press: 31–53.

Whiting D, Unwin N, Roglic V (2010). Diabetes: equity and social determinants. In: Blas E, Kurup AS, eds. Equity, social determinants and public health programmes. Geneva, World Health Organization (http://whqlibdoc.who.int/publications/2010/9789241563970_eng.pdf, accessed 03 January 2011).

WHO (2002). World health report 2002. Reducing risks, promoting healthy life. Geneva, World Health Organization.

WHO (2003). Diet, nutrition and the prevention of chronic diseases. Geneva, World Health Organization (Technical Report Series 916).

WHO (2004). World health report 2004 – changing history. Geneva, World Health Organization (http://www.who.int/whr/2004/en, accessed 16 November 2009).

WHO (2008a). Closing the gap in a generation. Commission on social determinants of health. Final report. Geneva, World Health Organization.

WHO (2008b). Inequalities in young people's health. Health Behaviour in School-aged Children (HBSC) study: International report from the 2005/2006 survey. Geneva, World Health Organization (Health Policy for Children and Adolescents, No. 5).

WHO Regional Office for Europe (2006). European strategy for the prevention and control of noncommunicable diseases. Copenhagen, WHO Regional Office for Europe.

WHO Regional Office for Europe (2007). The challenge of obesity in the WHO European region and the strategies for response. Copenhagen, WHO Regional Office for Europe.

WHO Regional Office for Europe (2010). European health for all database (HFA-DB) [online database]. Copenhagen, WHO Regional Office for Europe (http://www.euro.who.int/en/what-we-do/data-and-evidence/databases/european-health-for-all-database-hfa-db2, accessed 25 October 2010).

Wild S et al. (2004). Global prevalence of diabetes: estimates for the year 2000 and projections for 2030. Diabetes Care, 27:1047–1053.

Wilkinson RG, Picket KE (2006). Income inequality and population health: A review and explanation of the evidence. Soc Sci Med, 62:1768–1784.

Wong M et al. (2002). Contribution of major diseases to disparities in mortality. N Engl J Med, 347:1585–1592.

Zadnik V (2005). Geografska analiza vpliva socialno-ekonomskih dejavnikov na incidenco raka v Sloveniji v obdobju 1995–2002. Doktorsko delo. Ljubljana, Univerza v Ljubljani.

Zaletel-Kragelj L, Eržen I, Fras Z (2004). Interregional differences in health in Slovenia. II. Estimated prevalence of selected behavioural risk factors for cardiovascular and related diseases. CMJ, 45(5):644–650.

Zaletel-Kragelj L, Fras Z, Maučec-Zakotnik J, eds. (2004). Tvegana vedenja, povezana z zdravjem in nekatera zdravstvena stanja pri odraslih prebivalcih Slovenije, I. Značilnosti in povzetek raziskave. Ljubljana, Countrywide

Integrated Noncommunicable Disease Intervention (CINDI) Slovenija.

Zver E (2010). Dostopnost do zdravstvenih storitev. In: Čelebič T, ed. Socialni razgledi 2009. Ljubljana, Urad za makroekonomske analize in razvoj: 41–45.

Zwi A (2001). Injuries, inequalities, and health. In: Leon D, Walt G, eds. Poverty, inequality and health. An international perspective. Oxford, Oxford University Press: 263–282.

ZZS (2010). Podatki o številu zasebnih zdravnikov. Ljubljana, Zdravniska Zbornica Slovenije (https://intra.zdravniskazbornica.si/intra/zzs.asp?FolderId=609, accessed 20.12.2010).

ZZZS (2010). Poslovno poročilo za leto 2009. Ljubljana, Zavod za zdravstveno zavarovanje Slovenije.

III. Approaches and policies for tackling social inequalities in health

We can affect socioeconomic determinants of health with political, economic and personal decisions. In this chapter we wish to present general principles of action, approaches and policies that contribute to reducing social inequalities in health.

General principles of action for health equity

In September 2008 the World Health Organization (WHO) published a report of the Commission on Social Determinants of Health entitled Closing the gap in a generation: Health equity through action on the social determinants of health (WHO, 2008a). The Commission argues that structural factors (including the distribution of power, income, goods and services on a global and national level), as well as living conditions (which include, inter alia, access to health care and education, working and living conditions, conditions in communities and in rural or urban centres, and the chances of a successful life) together constitute the social determinants of health, which are responsible for the majority of health inequalities between and within countries. The Commission gathered information on what can be done to enhance health equity, and urged the global public to strive to achieve this equity. It has formed three general principles of action:

1. Improve living conditions – circumstances in which people are born, grow up, live, work, and grow old.
2. Abolish the unjust distribution of power, money and resources, which are structural determinants of living conditions, at the global, national and local levels.
3. Measure the extent of the problem, evaluate action, expand the base of knowledge, train professionals who have knowledge on social determinants of health, and raise the general awareness of social determinants of health (WHO, 2008a).

Health and health equity in all policies

"Health in all policies" – which is the 21st-century approach to address connections and dependencies between health and economic and social development – points out that better health and reducing health inequalities must be a common objective of all sectors pursuing this goal with joint integrated policies, strategies and programmes. By considering the impacts on health in developing policies, strategies and programmes in all sectors and between different stakeholders, we can ensure that the key determinants of health, which significantly contribute to better health and also to key objectives in the policies of other sectors and partners, are systematically considered. This approach builds on the sustainable development of health and equity of both the current and future generations.

The concept of health in all policies has been developed at the global level since the adoption of the Declaration of Alma Ata (WHO, 1978), which identified that health is the most important global social goal, the realization of which should not only include health, but also different social and economic sectors. Governments that are responsible for health of the population can only achieve this by ensuring adequate health and social policies. The emphasis on health inequalities during that initial phase was focused mainly on the differences between developed and developing countries, while inequalities were identified as unacceptable due to political, social and economic reasons and as such a concern for all countries. Strengthening and protecting population's health is a necessary condition for sustainable economic and social development, contributing to a better quality of life. One of the main strategic WHO documents, Health for all in the 21st century (WHO, 1999) – which emphasizes the importance and dignity of every human being, equal rights, obligations and the shared responsibility for health for all – is based on this realization, while health and welfare are defined as the cornerstone of social and economic development.

As one of the five key components of health promotion, the Ottawa Charter (WHO, 1986) introduced the independent concept of a healthy public policy. The Adelaide Recommendations (WHO, 1988) defined more specifically the concept of a healthy public policy, and emphasized the importance and responsibility of various sector policies, which in their activities must all strive to protect the health of the entire population. An important contribution was also made by the Finnish EU Presidency with the publication of Health in all policies (2006), and in 2010, the modern key directions for this area were summarized by the Adelaide statement (WHO, 2010a).

The concepts of globalization, sustainable development and improving equity in health are increasingly intertwined with the approach of health in all policies. This was admonished by the Bangkok Declaration (WHO, 2006), which – in addition to emphasizing the role of various sectors – states that the promotion of health should be at the heart of the global development agenda, and the primary responsibility of the entire government. The key problem, according to the declaration, is that the responsibility for health outcomes remains at the national, regional and local levels, while policies

1 1. Commission report to the European Parliament, Council, European Economic and Social Committee and Region Committee: *Solidarity in health: Reducing health inequalities in the EU.* European Commission, 2009.
2. Independent report on the social determinants of health and reducing health inequality, mediated during the Spanish presidency of the EU: *Towards equity in health.*
3. Commission on Social Determinants of Health, Final Report (WHO) on improving health equity: *Closing the gap in a generation.*
4. Health strategy in the WHO European Region: Public debate on the joint operation of health care challenges in Europe by 2020.
5. *Europe 2020 Strategy for intelligent, sustainable, and inclusive increase.* European Commission, 2010.
6. Reports of the Commission on the measurement of economic performance and social progress.

that significantly affect the key determinants of health emerge at EU or global levels. In recent years, several major international calls for action on strengthening health equity and health promotion have aligned. Thus, the "Nairobi call for action" underlines the importance of closing the gaps in implementing health promotion activities and sets clear obligations for governments and stakeholders.

Therefore, to achieve good health, the joint and coordinated action of numerous policies is required. Health Impact Assessment has been introduced as a result of the realization that the health sector itself cannot achieve the objectives of welfare in the field of public health. The Health Impact Assessment is a combination of procedures, methods and tools by which a policy, programme or project may be assesed as to its potential effects on the health of a population, and the distribution of those effects within the population (WHO, 2010b). On the basis of such assessment, recommendations are developed, which serve to increase the estimated positive and reduce the estimated negative impacts on population's health. The implementation of Health Impact Assessment has emerged as the norm in the 1980s in the WHO Health for All programme, and later, in the Health 21 programme, it was identified as one of the four main strategies for action to promote health (Gabrijelčič, Blenkuš & Lock, 2004). In Slovenia, the HCHIA of 1992 introduces the implementation of Health Impact Assessment, while the Treaty of Amsterdam of 1997 (Article 152) introduces it to the European Community.

Approaches to tackle social inequalities in health

Several approaches and policies that contribute to the improvement of the health of a population are available. If these approaches and policies are to effectively contribute to reducing health inequalities or to strengthen health equity, they must be supported by additional specific actions and approaches that enable all population groups to achieve their optimal health potential.

In both literature and in practice, three approaches emerge that are used for reducing health inequalities.

1. **The population approach:** this works across the entire social gradient and attempts to reduce differences in health between all socioeconomic population groups by improving the health status of all (levelling up). In this approach, we make use of the universal policies on education, employment, and health and social security, which provide equal access for all to services and resources that ensure quality of life. In implementing these policies, we must be vigilant regarding additional specific actions and approaches for disadvantaged groups, with which we can ensure that they can benefit from these universal policies as effectively as the more privileged.

2. Reducing the gap between the most socioeconomic disadvantaged and most privileged groups or average: for this approach, it is essential to reduce the differences between the socioeconomically vulnerable in comparison to a selected comparative group or average. We implement specific policies, such as those for reducing social exclusion, for securing social transfers, for promoting active employment, and others.

3. Targeted interventions for vulnerable groups: these interventions are based on specific actions and programmes that are intended for vulnerable groups from the socioeconomic and public health perspective. Among others long-term unemployed, homeless people, Roma, as well as prostitutes can be considered as vulnerable groups.

The combined use of all three approaches is the most effective for preventing and reducing social inequalities in health.

Tackling health inequalities across the entire social gradient

If the policies are selectively targeted only to vulnerable groups, they would not be sufficient to achieve a reduction of the social gradient in health. Policies should be built on the broader social welfare approach, while simultaneously developing appropriate measures for particularly vulnerable groups. Gradient systematically occurs, both in health outcomes, such as morbidity, as well as in risk factors. Since lifestyle is a reflection of socioeconomic conditions and determinants of health, policies should be directed into structural measures and causes or determinants that create inequalities and not only into individual behavioural patterns. Recognising structurally conditioned behaviours offers an answer as to why we need structural measures for reducing lifestyle-related health inequalities. Such measures include, for example, a fiscal policy increasing the price of unhealthy goods, as well as legislative measures that impede access to them. Of equal importance is encouraging a healthy lifestyle and facilitating a choice of healthier alternatives, such as easier access to healthy foodstuffs and sports/recreational premises (subventions and other actions).

One of the first examples of public health policy, where the public health objectives derive from broader determinants of health in Europe, was established in Sweden (Swedish National Institute of Public Health, 2003). They identified the priority structural determinants as:

1. participation and potential influence in society
2. economic and social security
3. ensuring favourable conditions during childhood and adolescence
4. healthier working environment
5. healthy and safe environment and products
6. medical treatment and care, which actively promotes good health.

Since most of these priorities are outside the scope of the health sector, the overall objective of Swedish public health policy is aimed at creating conditions for good health according to the principle of equity for all.

Another good example of a systematic approach to reducing social inequalities in health (that comes from the fact that complex problems require complex solutions and focus on the social gradient) is the Norwegian national strategy for reducing social inequalities in health (Norwegian Ministry of Health and Care Services, 2007). The Norwegian Directorate for Health and Social Affairs has developed a matrix for reducing socially determined health inequalities (Table 3.1). The matrix shows the strategic entry points for different sector policies at different levels, taking into account universal and selective approaches (Torgersen, Giæver & Stigen, 2007; Strand et al., 2009).

	Social reforms (*upstream*)	Reducing risk (*midstream*)	Reducing outcomes (*downstream*)
Universal actions	Public education system, tax policies, employment policies, etc.	Working and living environment, broader actions in the field of lifestyle, etc	Health system
Selecticve actions	Social support, etc.	Targeted actions in the field of lifestyle, etc.	Targeted health services

Table 3.1. Policy matrix for reducing social health inequalities (Torgersen et al., 2007)

The key objective of the Norwegian strategy (2007) is to raise the health of the entire population to a level attained by the healthiest people, underlining four priority areas that coincide with the four cells of the matrix:

1. reducing socioeconomic inequalities, particularly in the field of income inequalities, inequalities in early childhood, education, employment, and working conditions that contribute to the overall health inequalities;
2. reducing social inequalities in the field of health-related lifestyle and use of health services;
3. promotion of social inclusion;
4. development of knowledge and cross-sectoral tools.

All priority areas have specific defined objectives that are measurable.

Regional initiatives for reducing health inequalities

There are numerous examples of good practice in the world, in terms of cross-sectoral approaches to reducing health inequality, especially at the regional and local levels.

Such an example is the Scottish Government's commitment to reducing inequality. In 2008 and 2009, the Scottish Government issued three related documents – Equally well, The early years framework and Achieving our potential – that present three related policy frameworks (Government of Scotland, 2010; Macintyre, 2007). Each of these deals with the causes of health and other inequalities. Since they estimated that inequalities are a significant obstacle to sustainable economic development, reducing those inequalities has become a major government priority. The cross-sectoral ministerial working group for reducing inequalities is responsible for the preparation of strategic frameworks, along with their implementation and evaluation. The group is led by the Minister of Public Health and Sport and the members are, inter alia, the Minister for Community Safety, the Minister for Children and Early Years, the Minister for Schools and Skills, the Minister for Communities and Housing, the Minister for Enterprise, Energy and Tourism, and the Minister of the Environment. In 2010, it produced the first report on the progress made in the light of the adverse public financial situation. The report stresses that the three related strategic frameworks – Equally well, The early years framework and Achieving our potential – are the best approach to improving the situation in the long run. Therefore, they concluded that it is necessary to continue with activities at the level of the Scottish Government, as well as at the local level, in all proposed areas. The report highlights the need for setting priorities at the local level, since this would provide the best possible results with the available resources. The joint performance of partners in transforming local services is a key factor in implementing the vision and planned changes. With joint work and shared resources, local partnerships (Community Planning Partnership) should work on the causes that give rise to inequality. Actions aimed at reducing inequalities in early childhood are at the centre of the vision for reducing inequalities.

A successful example of a coordinated approach to reducing interregional health inequalities resulting from a poor socioeconomic status is the programme "Investment in Health and Development in Pomurje – MURA". In 2002 the Slovenian Government decided that it will accelerate investments for balanced regional development in the economically least developed region. Investing in health and development has become one of the three development priorities of the region.

The concept of investment for health and development (Fig. 3.1) includes all three approaches to reducing health inequities. It builds on the population approach, the action for reducing the gap between the most socioeconomic disadvantaged and most privileged group or average, and on targeted interventions for vulnerable groups. The programme promotes joint planning of development policies, programmes and projects, taking into account the social and economic determinants of health.

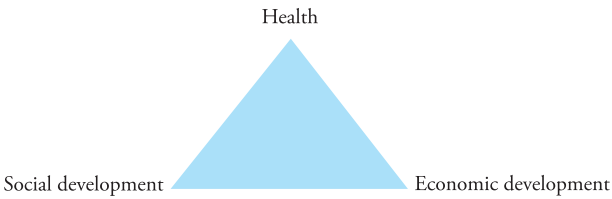

Fig. 3.1. Investment for health triangle (WHO)

The concept of investment for health is based on the evidence that social and economic development is closely linked to health. This was the foundation for placing health and the reducing of health inequalities into the regional development programme and has served as a starting point for allocation of EU funds for cross-sectoral projects in the areas of health and development. The numerous projects within the MURA programme have been divided into four priority areas (Fig. 3.2) with four key objectives:

1. improve the lifestyle of the rural population with health promotion;
2. increase the production and availability of healthy food;
3. develop health-friendly tourism products and services;
4. preserve the natural and cultural heritage, and reduce the environmental burden in the region.

In 2006 the project "Investment in Health and Development in Pomurje – MURA" was awarded at the WHO Ministerial Conference on Counteracting Obesity in Istanbul for successful cross-sectoral integration in the field of health promotion, healthy diet and healthy tourism.

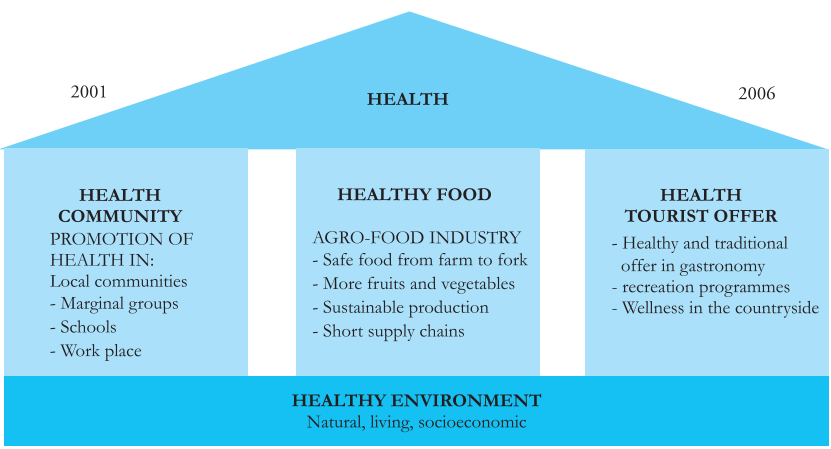

Fig. 3.2. Key working areas of the programme MURA (Buzeti T, 2008).

The effects of the MURA programme were predominantly evaluated from the perspective of health in terms of progress in lifestyle, improvement of nutrition habits and physical activity. The Countrywide Integrated Non-communicable Disease Intervention (CINDI) survey analyses entitled The Health Promotion Programme in the Pomurje region/Evaluation of the effectiveness in Slovenia (Zaletel Kragelj, Fras & Maučec-Zakotnik, 2004) has confirmed that people in Pomurje eat healthier than in 2001, which was also confirmed by the parallel evaluation of the programme "Lets live healthy". Key strategic shifts include integration of health and health inequalities in the regional development programme for 2007–2013, the preparation of regional strategy for reducing health inequalities (Belović et al., 2005) and the construction of cross-sectoral partnership networks both for planning and implementing programmes and projects related to cross-sectoral investment in health.

The MURA programme, the objective of which was to improve health and the quality of life in Pomurje, has in a few years grown into a concept that is now the basis for the strong partnership network and joint work on development projects in the region.

Socioeconomic and policy framework for strengthening health equity in Slovenia

Education, employment and income are the key entry points for tackling social inequalities in health. Education provides literacy, analytical and communication skills that contribute to greater employability and the individual's ability to deal with various challenges, including health-related issues. Employment builds on the aforementioned skills and provides income that is the basis for providing other health determinants, such as housing, nutrition, and so on.

Strengthening equity is an important political priority in Slovenia. In various areas polices and programmes are in place that improve equity in society. To name just a few: promoting formal education and lifelong learning with the aim of raising the educational level of the entire population, particularly of vulnerable groups (individuals that did not complete formal education); promoting participation in the labour market, especially of the long-term unemployed, people with disabilities and older women; a complex package of actions to ensure social and health security of children in early childhood, along with greater involvement in educational institutions (nurseries and kindergartens); equal access to social and health care, as well as strategies and programmes for vulnerable groups.

However, Slovenia is faced with many challenges in the field of social security, such as:

- slow and insufficiently connected modernization of social security systems and institutions, including the adaptation of social protection systems and the concept of "flexicurity" (availability, responsiveness);
- demographic trends reflected in the ageing population and the rising elderly dependency coefficient;
- responding to changes (globalization, competitiveness, migration) and providing the necessary adjustments in the labour market; where maintaining and increasing employment are important prerequisites to facilitate the financing of social protection systems;
- concern for fertility (the current fertility rate is not sufficient for the reproduction of the population) and appropriate family policy, as well as the policy of family-friendly working environments (reconciling family and professional life);
- intergenerational solidarity, which is crucial for financing social security (for example, pensions), access to housing, the provision of care/assistance within the family, and so on; implementation of the concept "Help in the right place, help in the right hands" and the provision of income and access to social services, particularly those of general interest;
- strengthening self-responsibility and self-awareness of the need for constant concern for personal development, education and training, since neglect of these can lead to a reduction or even loss of certain skills and with it the competitiveness of individuals on the labour market (Ministry of Labour, Family and Social Affairs, 2008).

The National health care plan stresses the particular importance of working with vulnerable populations, both in terms of public health and use of the health care system. In January 2009, Slovenia introduced free supplementary health insurance for the most socioeconomically vulnerable groups.

Assuring health services in the primary health care system that most effectively correspond to the health needs of the population and are in accordance with the WHO strategy is deemed among the most important mechanisms in health care-related health policies and health in all policies (WHO, 2008b).

The system of school meals is a good example of practical implementation, operating on the principle of Health in All Policies approach. This is particularly important because of the high employment level of women in Slovenia. The system of well-organized school meals was upgraded in the period of implementation of the Resolution on the National Nutrition Policy Programme 2005–2010. The system offers up to four meals a day for

all children in primary schools. In secondary schools, the system offers students up to two organized meals, or even more in exceptional cases. Virtually all primary schools and a quarter of all secondary schools have their own kitchens. Meals are prepared in accordance with the Guidelines for a healthy diet that contain not only the physiological normative, but also the instructions for preparing healthy meals, the standards for ordering food, recipes for preparing meals, as well as stressing the educational elements. The guidelines are drawn from the School Nutrition Act, on the basis of the previous legislation in 2010. One of the most important elements of school meals is that they improve the social gradient. All children in both primary and secondary schools receive subsidized meals. Approximately one third of the children, dependent on their socioeconomic status, receive free meals. According to the expectations of legislators, this can affect a reduction of health inequalities. In primary schools, a healthy diet is supported with the curriculum content, as children receive important information on healthy eating in domestic science classes as part of the normal curriculum. A great deal of information is also included in the individual natural science curriculum.

Slovenia has a long tradition of reducing inequalities among regions. The first foundations were laid in the early 1970s, together with the concept of polycentric development and the adoption of the first Act on Stimulating Balanced Regional Development, which introduced action in the relevant areas. These have been followed by new legislation since then. The last update is in the process of adoption. Reducing disparities in population health between regions is one of the more concrete and measurable objectives in the Regional Development Strategy for the Republic of Slovenia.

The effects of past actions have been both limited and varied, at different times. The fact is that they were not able to stop, but only to mitigate the growing disparities between regions. Therefore, even today, regional disparities in Slovenia – as measured by GDP per capita – are moderate when compared with the differences in other EU countries. Especially in the countries of central Europe (for example, the Czech Republic, Slovakia, Hungary and Poland), these differences were significant in 1996 and thus far have increased more than in Slovenia (see Table 3.2).

Countries	The relationship between the most and least developing regions at the NUTS 3 level	
	1996	2007
Czech Republic	1:2	1:3
Hungary	1:3.2	1:4.7
Slovakia	1:3.3	1:4.3
Slovenia	1:1.9	1:2.2
Poland	1:3.6	1:4.8

Table 3.2. The relationship between the most and least developed regions in selected countries with GDP per capita (purchasing power standard) for some EU Member States, 1996 and 2007

Source: Eurostat, IMAD.

Note: Table compiled using data from the Eurostat and IMAD databases.

The differences in life expectancy among different regions is still relatively high; consequently, in the future, reducing health disparities between regions must remain a key objective of regional policy.

References and resources

Belović, B et al. (2005). Strategija za krepitev zdravja in akcijski načrt za zmanjševanje neenakosti v zdravju v pomurski regiji. Murska Sobota & Brussels, National Institute of Public Health & Flemish Institute for Health Promotion.

Buzeti T, Maučec Zakotnik J (2008). Investing in health and development in Slovenia, programme Mura. Murska Sobota, Centre for Health and Development Murska Sobota

Gabrijelčič Blenkuš M, Lock K (2004). Health impact assessment: historical overview and basic methodology. Zdrav Var, 2(1):83–87.

Government of Scotland (2010). Equally well. Review 2010. Report by the Ministerial Task Force on implementing Equally Well, the Early Years Framework and Achieving Our Potential. Edinburgh, Government of Scotland.

Macintyre S (2007). Inequalities in health in Scotland: what are they and what can we do about them? Glasgow, Medical Research Council.

Ministry of Labour, Family and Social Affairs (2008). National report on strategies for social protection and social inclusion 2008–2010. Ljubljana, Ministry of Labour, Family and Social Affairs (http://www.mddsz.gov.si/fileadmin/mddsz.gov.si/pageuploads/dokumenti__pdf/npsszsv08_10_en.pdf, accessed 13 January 2011).

Norwegian Ministry of Health and Care Services (2007). National strategy to reduce social inequalities in health. White Paper No. 20 to the Storting (2006–2007). Oslo, Norwegian Ministry of Health and Care Services.

Ståhl T et al. (2006). Health in all policies – prospects and potentials. Helsinki, Ministry of Social Affairs and Health (http://www.stm.fi/Resource.phx/eng/subjt/inter/eu2006/hiap/index.htx.i1153.pdf, accessed 16 December 2010).

Strand M et al. (2009). Setting the political agenda to tackle health inequalities in Norway. Studies on social and economic determinants of population health, No. 4. Copenhagen, WHO Regional Office for Europe.

The National Institute of Public Health (2003). Sweden's new public health policy, 2003. The national institute of public health. Stockholm, The National Institute of Public Health (http://www.fhi.se/PageFiles/4382/roll_eng.pdf, accessed 3 January 2011).

Torgersen TP, Giæver Ø, Stigen OT (2007). Developing an intersectoral national strategy to reduce social inequalities in health. The Norwegian case. Geneva, World Health Organization (http://www.who.int/social_determinants/resources/isa_national_strategy_nor.pdf, accessed 3 January 2011).

WHO (1978). Declaration of Alma-Ata: International conference on primary health care, Alma-Ata, USSR; 6–12 September. Geneva, World Health Organization (http://www.who.int/hpr/NPH/docs/declaration_almaata.pdf, accessed 3 January 2011).

WHO (1986). Ottawa Charter for Health Promotion. Geneva, World Health Organization (http://www.who.int/hpr/NPH/docs/ottawa_charter_hp.pdf, accessed 3 January 2011).

WHO (1988). Adelaide Recommendations on healthy public policy. Second International Conference on Health Promotion, Adelaide, South Australia, 5–9 April. Geneva, World Health Organization.

WHO (2006). The Bangkok Charter for health promotion in a globalized world. Geneva, World Health Organization (http://www.who.int/healthpromotion/conferences/6gchp/hpr_050829_%20BCHP.pdf, accessed 3 January 2011).

WHO (2008a). Closing the gap in a generation. Commission on social determinants of health. Final report. Geneva, World Health Organization.

WHO (2008b). World health report 2008. Primary care now more than ever. Geneva, World Health Organization.

WHO (2010a). Adelaide statement on health in all policies. Moving towards a shared governance for health and well-being. Geneva, World Health Organization (http://www.who.int/social_determinants/hiap_statement_who_sa_final.pdf, accessed 17 October 2010).

WHO (2010b). Health impact assessment. Defition. Geneva, World Health Organization (http://www.euro.who.int/en/what-we-do/health-topics/environmental-health/health-impact-assessment, accessed 23 December 2010.

WHO Regional Office for Europe (1999). Health 21: the health for all policy framework for the WHO European Region. Copenhagen, WHO Regional Office for Europe (European Health for All Series, No. 6) (http://www.euro.who.int/en/what-we-publish/abstracts/health21-the-health-for-all-policy-framework-for-the-who-european-region, accessed 4 January 2011).

Zaletel-Kragelj L, Fras Z, Maučec-Zakotnik J, eds. (2004). Tvegana vedenja, povezana z zdravjem in nekatera zdravstvena stanja pri odraslih prebivalcih Slovenije, I. Značilnosti in povzetek raziskave. Ljubljana, CINDI Slovenia.

IV. Challenges

Knowledge of the social determinants of health and inequalities is a significant opportunity for improving various policies that determine our (co)habitation, touch on the basic philosophical and ethical principles of humanity, and as a result determine the health of the population. Consequently, this area receives a great deal of attention from the EU as well as international organizations (such as WHO), individual countries, regions, and civil associations or nongovernmental organizations.

Convergent, health-oriented development directions require a comprehensive approach and represent an important social challenge that demands numerous changes in the fields of politics, research, education and implementation. (Premik, 2004).

Slovenia has a long tradition of an active approach to improving equity, through various universal policies (education, health, social security, taxation policies, employment policies, and so on), which seek to ensure equal opportunity for optimal development and quality of life from early childhood to old age. Some challenges relating to health inequalities have changed over time and with intermediary success, while others have remained constant. In recent years, several important professional meetings on the topic of health inequalities have been held in Slovenia. The European and national cross-sectoral investment in health and health equity workshop (28–29 May 2009), and the NIPH workshop Ensuring greater equity in health – challenges of the recession for public health and health promotion in Slovenia (14 April 2010) pointed out (Centre for Health and Development Murska Sobota, 2009; Gabrijelčič Blenkuš, 2009):

- that the systematic monitoring of health and social status, continuous work, and the better cooperation of all stakeholders is necessary;
- that human capital and a clear strategy are fundamental for cross-sectoral cooperation;
- that the health sector cannot be operated purely from an economic perspective; and
- that the economic crisis may be an opportunity for change.

The national report of the Ministry of Labour, Family and Social Affairs in 2008 cites, among others, as the key challenges for social protection and social integration, the necessity for (Ministry of Labour, Family and Social Affairs, 2008):

- greater social inclusion of individuals and cohesion of the society
- greater accessibility and quality of general-interest social services
- improved effectiveness and suitability of social transfers.

The findings of the WHO rapid appraisal mission on social determinants of health (November 2009) show that the strengthening of health equity is an important priority in Slovenia. Most residents have good access to social and health care, as a multitude of

policies and activities exist within and outside the health sector (such as health insurance for the unemployed, complementary health insurance for the socially most vulnerable residents, subsidised school meals, subsidised costs for nurseries, and so on) that have a significant impact on health equity. Although both social cohesion and solidarity have a long tradition and continue to be important social values, societal changes, globalization, and the economic crisis have brought about a change of focus in policy discussions and development strategies. These increasingly expose growth and development, flexible employment, and efficient economy, based on individual responsibility (Rohregger et al., 2010).

It is known that individuals from lower socioeconomic groups are more vulnerable to economic shocks. Data on the health implications of the recent economic crisis are not yet available, but we can draw some parallels to the transition period of the 1990s in some central and eastern European countries. Analyses have shown, for example, that in Estonia and Lithuania mortality rates decreased among the highly educated, but increased among those of lower levels of education (Leinsalu et al., 2008).

In many places, the financial crisis has led to reduced public spending.

Arguments for and against cuts in public spending in response to economic recession are complex. Before accepting large cuts in public spending, it is important to contrast the lack of evidence on the effectiveness of such short-term fixes with potentially dire repercussions for population health and welfare (Stuckler et al., 2010).

To successfully manage health inequalities in Slovenia, it is necessary to respond to the following five challenges.

1. Having a clear vision for the development of Slovenian society in which health is an important priority.
2. Developing a national framework for reducing inequalities that includes the appraisal of health and health equity policies.
3. Measuring the social determinants of health and health inequalities.
4. Identifying common objectives and manifold benefits for different sectors, and establishing their mutual coordination.
5. Being a pro-active member of the global world.

All the stated challenges are mutually intertwined, and each offers both limitations and opportunities to the others, for improving cohesion in our society.

Having a clear vision for the development of Slovenian society

As a country, Slovenia needs a comprehensive vision of development. The development strategy should follow this vision, which should represent a broader concept of welfare that includes all three components of development (economic, social and environmental), as well as a sustainable approach to the development of all three components. **Reducing health inequalities should be one of the fundamental priorities of Slovenia's vision of development.** The Government of the Republic of Slovenia has a key role in shaping this vision.

In Slovenia's development strategy (Šušteršič, Rojec & Korenika, 2005), the reduction of health inequalities is already exposed as one of the country's strategic priorities. Operational measures that follow this priority are mainly restricted to sector policies (such as employment, social and social welfare policies, specifically in terms of protecting vulnerable groups). It is important that the reduction of health inequalities and the strengthening of health remains one of the priorities in Slovenia's Development Strategy and that it more markedly affects the formation of sector policies in the future. Following a decision by the Government of Slovenia, the updated strategy should be adopted by the end of 2011.

To achieve consensus on the vision and development strategy, a consensus on the fundamental values of Slovenian society is important. The attitude towards solidarity and equity in a society is strongly reflected in both the search for immediate answers to the everyday challenges of a contemporary society and in the vision of future development. The attitude towards solidarity and equity is socially conditional, it varies in different cultures, and it changes with time. That is why it is important to know how, in the everyday life of an individual, we perceive the second article of the Constitution of the Republic of Slovenia, which states: "Slovenia is a state governed by the rule of law and a social state" (Constitution of the Republic of Slovenia, 1991). The Constitution is the founding framework for shaping our society.

It is just as important to reach a consensus that economic development is not the most important measure of our society's success. When setting visions and strategic objectives we must consider the mutual influence of economic, social, and environmental development, and health. In order to achieve stable sustainable development of our society and optimize its potential, we need a stable balance between these factors. Policies should be evaluated for their consequences on the health of people as well as for other desired results.

Apart from ethics and humanism affecting social values, the cost of inequity is another piece of information that is necessary for answering questions relating to what role reducing health inequity should play in the vision of development in Slovenia. For this, we immediately think of the direct costs of treatment. Yet at the same time, we should be aware of the significantly more important indirect and direct costs arising

from the circumstances that are a consequence of inequalities (such as a less flexible labour market, reduced effectiveness in terms of pension reform, lower tax revenues and higher social transfers, reduced productivity, higher levels of crime, and so on). Even lack of trust, weak social capital, and a low level of social cohesion are very expensive for a society. The question of (in)equality is therefore a fundamental issue relating to the vision of development as it addresses the sort of future we want and expect, and as such provides a framework for fundamental development objectives.

Developing a national framework for reducing inequalities

Health inequalities occur as a result of various socioeconomic factors that we have also perceived in Slovenia between genders, different population groups, and between different geographical regions. **To effectively tackle health inequalities we need a national framework that will clearly establish coordinated objectives and priorities for different sectors at the national and local levels, and provide a measurement of the effect of various policies on health.** The key responsibility is held by the legislative and executive branch of government.

The strengthening of equity is gaining in importance (partly due to the economic crisis), and is being paid ever greater attention at the level of individual countries and at the EU level. This is also increasingly reflected in various EU strategies.

Findings of the aforementioned WHO rapid appraisal mission (November 2009) show that in Slovenia, social cohesion and solidarity are still important social values, confirmed by a wide range of social inclusion policies, particularly in the area of social protection and employment. Projects, policies, and programmes in the field of socioeconomic determinants of health and health inequalities in different regions and sectors of Slovenia are reasonably dispersed (Rohregger et al., 2010). These policies are mostly focused on specific vulnerable groups. Slovenia has no comprehensive strategy for reducing the social gradient. Individual policies are available (such as a nutrition policy), but reflect a sectoral approach. This impedes the spread of awareness and knowledge of socioeconomic determinants of health at the level of the government and other levels. Coordinated professional groundwork, agreed social strategies, and political will are necessary for implementing health in all policies (Premik, 2005).

Focusing solely on the most disadvantaged will not reduce health inequalities sufficiently. To reduce the steepness of the social gradient in health, actions must be universal, but with a scale and intensity that is proportionate to the level of disadvantage. We call this proportionate universalism (Marmot et al., 2010). Experience from different countries demonstrates that the reduction of vulnerability due to poverty is an important objective in the context of reducing inequalities. At the same time, we noticed that in medium-high and high-income countries, poverty is not the only reason for the observed degree

of health inequalities. It is important that along with measures for strengthening health equity, we consider the fact that while overcoming poverty and vulnerability is important, it will not have a sufficient impact on the ultimate objective of ensuring a healthier society for everyone.

Measuring the social determinants of health and health inequalities

If we are to decide where we are going, we must first know where we are. **The systematic collection and analysis of data is a prerequisite for planning and acting to reduce health inequalities, and for monitoring the achievement of established objectives.** Based on the conceptual framework by the Commission on Social Determinants of Health, WHO conducted a rapid appraisal on Social Determinants of Health in Slovenia, which is now significantly upgraded by this report. In the future, we need more in-depth continuous monitoring of health inequalities that will be based on individual data. Access to individual data presents an important obstacle as it touches on protection of personal data. **The availability of information at an individual level, with links between socioeconomic and health data and the development of new sources of data, is vital for the systematic monitoring, analysis and evaluation of health inequalities and established objectives.**

Data on inequalities in Slovenia presented in Chapter II is an important step in that direction. In many areas, indicators are in use, which measure the results of individual policies. Many of them touch on the issues of equity (such as the National report on the strategies for social protection and social inclusion 2006–2008 (Ministry of Labour, Family and Social Affairs, 2008)), yet in most cases, use of individual services is simply recorded, or the indicators reflect population averages. There are few indicators measuring the results and impacts of policies on poverty, economic factors, health, or their effect on the social gradient (Rohregger et al., 2010). Measuring population averages can only tell us about the health status of the population, but not how it is spread among people. For this, we need a correlation between data on health and data on the social determinants of health. Information on health inequalities (the distribution of health) can tell us a great deal relating to how a society is applying the principle of solidarity.

Various health programmes and projects can affect health inequalities by reducing or even increasing them. For example, currently there are three screening programmes for breast, cervical and colorectal cancer implemented in Slovenia. As a rule, such programmes around the world have a greater response rate from those with better social determinants of health. This means that such programmes, if not properly planned and implemented, can increase health inequalities.

In the preparation and formulation of policies, programmes, and services in general (in health care, social care, education and elsewhere), it is necessary to consider how the social determinants of health affect the understanding and use of these services and then formulate them accordingly. This must become one of the standards of quality. It is important that we also include indicators in the evaluation of various policies, programmes and measures at the national, regional and local levels that will monitor their effects on health inequalities, and thus additionally encourage the integration of policies and programmes.

Social and health outcomes that will serve as indicators of policy efficiency should be determined. It is thus necessary to measure and assess strategies and programmes from different sectors, with respect to their impact on health and inequalities. At the same time, we must not forget to focus on monitoring the health – and it's changes over time – of an individual, relative to their social status. As the achievement of specific outcomes can take a long time, process and intermediate indicators must also be established. It is important that for both policies and in measuring we are not limited only to inequalities in financial burdens and access (e.g. to health services), but that we also measure the inequalities in the use of services or the inequalities of outcomes, because reducing inequalities in the latter two is much more demanding.

We are already designing a surveillance and reporting system in Slovenia that will be based on objectives and indicators. In the future, it will be necessary to strengthen and upgrade it, and to formalise cooperation between institutions that collect and analyse various data. In connection with this, the existing regulations should be examined and changed to facilitate the collection and exchange of information within and between various databases, while ensuring the protection of personal information.

Identifying common objectives and manifold benefits for different sectors

To be able to improve living conditions and eliminate unequal distribution of power, money and resources that are the structural factors of the aforementioned living conditions at the national and local levels, we will need better cooperation and linkage between activities within the national, regional and local structures (government, the structure of the regions, municipalities, local or city communities), and also links between the private sector and civil society. For a better linkage and improved cooperation, it is essential to identify common objectives and benefits for different sectors and stakeholders that also provide a positive impact on health. The involvement of professional institutes (such as the NIPH, SORS, IMAD, institutes of public health, regional development agencies, universities and so on) for implementing activities aimed at reducing health inequalities is important, as is an effective local system (see Premik, 2007).

Recognizing manifold benefits for individual sectors facilitates the cooperation of various stakeholders from the public, private and nongovernmental sectors, at all levels.

The development of human resources and capacities in the area of reducing health inequalities is vital for the better involvement of stakeholders. Increased knowledge and awareness are important for the future development of effective policies for reducing inequity in Slovenia. Public health is crucial for raising awareness and implementing policies for reducing inequalities from the national to the local level, yet Slovenia does not offer systematic education in public health for various professionals that work (or would work) in specific sectors (health in all policies); professional development is not even offered for those employed in health care or social care. This also applies to the public health sector that is instrumental in raising awareness and implementing policies for reducing inequity from the national all the way down to the local level. For effective implementation of measures, we need suitably qualified professionals, as well as empowered individuals and local communities.

Systems mechanisms are urgently needed in order to coordinate cross-sectoral objectives and benefits, while certain existing structures such as the Health Council[1] could be utilized more. The Ministry of Health – together with supporting professional institutions – must take on an active advocating and coordinating role at the national level. Structures and mechanisms must also be clearly defined in other sectors at the national, regional and local levels to ensure partner cooperation in the field of reducing heath inequalities.

Frequently, investing in health and development does not require large additional resources. As a rule, we can achieve a great deal if we understand the effects of ordinary measures (in the areas of housing, work, traffic, education, diet, enjoyment, unhealthy habits, inter-human relationships, and so on) on the health of people, which we can suitably adapt to reduce the inequity instead of increasing it. The decisive establishment of a safe traffic infrastructure with a network of bicycle paths – which contribute to faster tourist development, improve traffic safety, reduce environmental pollution, and provide greater everyday physical activity – is an example of good practices.

Be a proactive member of the global world

As part of the global world, Slovenia is facing global challenges in health, affected – among other things – by economic development and crisis, climate change, and political challenges. All these also affect migration flows. Health (and related inequalities) has become an internationally important strategic issue that affects the degree of global security.

1 More specifically defined by the Health Care and Health Insurance Act and the Health Services Act.

Slovenia is a destination for numerous migrant workers, and one of the challenges of contemporary Slovenian society is how it will respond to migration flows (taking into account the ageing of the Slovenian population). For this, the ethics of the private sector and their social responsibility for providing a safe environment in its broadest sense are very important.

Slovenia has a wealth of knowledge and experience in the area of social determinants of health and health inequalities, which we can use at home. However, this is not enough; it is important that we share our valuable experiences with others. As a responsible member of the international community (EU, United Nations, OECD), we have a moral obligation to raise our voices on behalf of those rarely seen and rarely (or almost never) heard at the global level.

References and resources

Constitution of the Republic of Slovenia. Official Gazette RS, no. 33/1991 dated 28 December 1991 (http://www.dz-rs.si/index.php?id=351&docid=25&showdoc=1, accessed 3 January 2011).

Centre for Health and Development Murska Sobota (2009). Report from the European cross-sectoral investment in health and health equity workshop, Jeruzalem pri Ljutomeru, 29 May. Murska Sobota, Centre for Health and Development Murska Sobota.

Gabrijelčič Blenkuš M (2009). Zagotavljanje večje enakosti v zdravju – izzivi recesije za javno zdravje in promocijo zdravja v Sloveniji. Poročilo z delavnice. Ljubljana, Inštitut za varovanje zdravja Republike Slovenije.(http://www.ivz.si/?ni=15&pi=5&_5_Filename=164.pdf&_5_MediaId=164&_5_AutoResize=false&pl=15-5.3, accessed 12 January 2011).

Leinsalu M et al. (2008). Educational inequalities in mortality in four eastern European countries: divergence in trends during the post-communist transition from 1990 to 2000. Int J Epidemiol, 38(2): 515–525.

Marmot M et al. (2010). Executive summary. In Marmot M et al. Fair society, healthy lives. The Marmot Review. Strategic review of health inequalities in England post-2010. London, University College London, The Marmot Review.

Ministry of Labour, Family and Social Affairs (2008). National report on the strategies for social protection and social inclusion 2008–2010. Ljubljana, Ministry of Labour, Family and Social Affairs (http://www.mddsz.gov.si/fileadmin/mddsz.gov.si/pageuploads/dokumenti__pdf/npsszsv08_10_en.pdf, accessed 13 January 2011).

Premik M (2007). Javno zdravje – od zamisli do izvedbe. In: Zvonka Zupanič Slavec. Javno zdravstvo 20. stoletja in njegov soustvarjalec Dr. Bojan Pirc. Ljubljana, IVZ RS: 31–46.

Premik M et al. (2004). Slovenska šola za javno zdravje. Ljubljana, Medicinska fakulteta.

Premik M (2005). Od zdravstvene politike do politike zdravja. In: Filej B. et al., eds. Zbornik predavanj. 5. kongres zdravstvene nege »Skrb za zdravje«, 14.12.2005. Ljubljana, Zbornica zdravstvene in babiške nege Slovenije, Zveza društev medicinskih sester, babic in zdravstvenih tehnikov Slovenije: 25–39.

Rohregger B et al. (2010). Health inequities in Slovenia. The findings of the World Health Organization Rapid Appraisal Mission on Social Determinants of health and health inequity. Summary. Ljubljana, World Health Organization.

Stuckler D et al. (2010). Thesis: Responding to the economic crisis: a primer for public health professionals. J Public Health, 32(3):298–306.

Šušteršič J, Rojec M, Korenika K (2005). Slovenia's development strategy. Ljubljana, Institute of Macroeconomic Analysis and Development.

Annex 1

Methodology

With the selection of data for the analyses of health inequalities, we have tried to comprise as many areas as possible where worse health and health care options occur due to socioeconomic differences. We used a combination of national cross-sectional epidemiological surveys and routine as well as register data. We mostly used data from the 2004–2008, and in some parts more recent data (clearly stated). We mostly used data from the 2004–2008 period, and in some parts of the analysis even newer data (clearly stated).

Data on children and adolescents were from the international Health Behaviour in School-aged Children: a WHO Cross-National Study (HBSC). The findings from the second repeat of the study carried out in Slovenia in 2006 were used in these analyses. The HBSC study is based on individual data collected with an internationally standardized questionnaire by random sampling of schoolchildren aged 11.5, 13.5, and 15.5 years. The sample size was 5130 pupils.

The international questionnaire contains a set of mandatory questions on demographic, behavioural, and psychosocial aspects of health. Individual countries may add a number of optional questions. The socioeconomic status is measured by the Family Affluence Scale (FAS) index, which contains questions regarding the number of cars in a family, the children's own rooms, the frequency of holidaying, and the number of computers in the family. The FAS index is divided into three classes; namely, the lower, middle, and high FAS, which also represent lower, middle and high socioeconomic status. In the inequality analyses we included data on self-evaluation of health, fruit consumption, physical activity, and injuries. A more detailed description of the course and contents, and already published findings of the study can be found at http://tinyurl.com/HBSC-SI and http://www.hbsc.org/overview studydesign.html.[1]

Details on risk behaviour and health during pregnancy were obtained from the Perinatal Information System of the Republic of Slovenia (PIS RS) – which is the medical birth register and contains data on all deliveries and births in the country. We used data from the 2004–2008 period. We analysed data on the time of the doctor's first examination during pregnancy, and the pregnancy outcome (preterm delivery, low birth weight, stillbirth, and perinatal mortality). We used education of the mother as a socioeconomic indicator. We divided the mothers into four classes according to their achieved level of education; in the lowest were mothers with primary education or less, and the highest contained mothers with tertiary education. For the calculation of infant mortality, we added data from the "Deceased persons report" to the PIS RS collection in order to identify all children that have died in their first year.

1 Accessed 21 December 2010.

Data on mortality of the population of Slovenia relate to the 5-year data (2004–2008) from the "Deceased persons report" database. Since we did not have individual data on socioeconomic status, we used data on socioeconomic status of municipalities in the ecological analyses. We used six geographical socioeconomic indicators: municipality development index (Official Gazette of the Republic of Slovenia, 2009); registered unemployment rate (IMAD, 2010); employment rate (IMAD, 2010); income tax base per capita (IMAD, 2010); number of recipients of financial social assistance (SORS, 2010); and an indicator combining the municipality development index plus recipients of financial social assistance. We analysed the indicators at the municipality and the administrative unit levels.

We categorised the inhabitants and the deceased, using the aforementioned variables for the municipalities of residence, into five groups according to the quintile principle. The exception was the "municipality development index" indicator, which was divided into six groups according to the amendment to the Financing of Municipalities Act (ZFO-1A, Official Gazette of the Republic of Slovenia, 2008). The highest two groups were merged for data protection reasons and thus we obtained five groups. Due to the difference in age structures of individual groups, we standardized the data on mortality to the European standard population. In the analysis we then compared the standardized data on mortality rates in the five groups and calculated the odds ratio, confidence interval, and the statistical significance. In the analysis we focused on the following areas: general mortality, infant mortality rate (under 1 year), suicide, injuries and poisoning (unintentional injuries, traffic, and other), ischaemic heart disease, cerebrovascular diseases, liver cirrhosis, and causes wholly attributed to alcohol.

We obtained data on the lifestyle of adults in Slovenia from the European Health Interview Survey study (EHIS) and the Risk factors for noncommunicable diseases in the adult population of Slovenia study (CINDI).

The national study Risk factors for noncommunicable diseases in the adult population of Slovenia was carried out as part of the CINDI programme in late spring 2008. Inhabitants aged 25–74 years were included. A sample size of 15 963 units was prepared at the SORS from the Central Population Register and was stratified into 9 health regions. The response rate was 49%, and 7352 of the returned questionnaires were suitable for analysis. Description of the study and methodology are described in detail in the publication Risk behaviour related to health and to certain health status among the adult population in Slovenia (Zaletel-Kragelj, Fras & Maučec-Zakotnik, 2004).

Individual data were gathered on the basis of self-reporting; the participants of the study received their questionnaires by mail. The data included in the analyses are the basic demographic data and data on socioeconomic status, as well as data on general health and dental health status, the use of health services, smoking, dietary habits, alcohol

consumption habits, physical activity and behaviour on the road. For socioeconomic indicators related to health indicators, we used level of education, type of work, and self-assessed social class.

The EHIS study is a European standardized and a comparable socioepidemiological survey in the field of health and health care. The survey and personal interviews were conducted in autumn 2007 across a sample of 2118 individuals aged 15 years and over, living in private households. The survey results are representative of the entire country.

In the analyses we mainly focused on the differences between groups of people relative to demographic or socioeconomic variables, including gender, age, level of education, employment status, income per family member (calculated as income per equivalent household member using the OECD-modified equivalence scale), and size and type of settlement. We analysed data on general health, fruit and vegetable consumption, self-reported data on body weight and height for calculating body mass index (BMI), consumption of alcoholic beverages, smoking, incidence of injuries resulting from traffic accidents or accidents during leisure time, exposure to difficult working conditions and, consequently, diseases arising from work. More information about the survey and published findings thus far can be found online at http://tinyurl.com/EHIS-SI.[2]

For the analyses of diabetes in Slovenia, we used the database of outpatient prescription drugs in 2008. It includes all individuals in that year that have received any medication for treating diabetes. We calculated the age-standardized prevalence for receiving medication. For the purposes of studying socioeconomic inequalities we analysed the differences in the prevalence of diabetes in the age group 40–65 years in five groups of municipalities relative to the registered unemployment rate.

Routinely collected data from the Cancer Registry of Slovenia (data on patients), the SORS (data on population and socioeconomic status) and the IMAD (data on the socioeconomic status) have been used in the geographical analysis of the impact of socioeconomic differences on cancer incidence in Slovenia. Patients included were those that were diagnosed as having cancer in the years 1995–2002, for those cancers which in earlier studies was demonstrated to be related to socioeconomic status. The standardized incidence rate was calculated for each municipality, cancer location, and gender, with the indirect standardization method. Since in certain municipalities there were very few individuals diagnosed with a certain types of cancer, the hierarchical Bayes model was used to smooth the extreme values of actual age-standardized incidence rates. Modelled age-standardized incidence rates are presented graphically on the maps.

2 Accessed 21 December 2010.

The deprivation index was calculated using factor analysis from indirect indicators of socioeconomic status, which are recorded by SORS and IMAD. The analysis took into account the indicator values from the middle year of the chosen period, while the values recorded at the latest census (2002) were used for indicators that are collected only during population censuses. The correlation strength and statistical significance between deprivation index and the modelled age-standardized incidence rate was estimated using the hierarchical Bayes model (Zadnik, 2005).

References and resources

Official Gazette of the Republic of Slovenia (2008). Act amending the Act on Local Finances (ZFO-1A). UL 2008; 57. Ljubljana, Uradni list RS (http://www.uradni-list.si/1/objava.jsp?urlid=200857&stevilka=2416, accessed 3 January 2011).

Official Gazette of the Republic of Slovenia (2009). Uredba o metodologiji za določitev razvitosti občin 2009. Uradni list RS 61/09 (http://www.uradni-list.si/1/content?id=93460, accessed 3 November 2010).

SORS (2010). Recipient of financial social assistance by municipality in Slovenia 2008. Ljubljana, Statistical Office of the Republic of Slovenia (http://www.stat.si/TematskaKartografija/file.asfx?id=3840, accessed 3 November 2011).

IMAD (2010). Registered unemployment rate 2004–2008, registered labour participation rate 2004–2008, income tax base per capita 2004–2008. Ljubljana, Institute of Macroeconomic Analysis and Development.

Zadnik V (2005). Geographical analyses of the impact of socioeconomic factors on cancer incidence in Slovenia 1995–2002 (PhD thesis). Ljubljana, University of Ljubljana.

Zaletel-Kragelj L, Fras Z, Maučec-Zakotnik J, eds. (2004). Tvegana vedenja, povezana z zdravjem in nekatera zdravstvena stanja pri odraslih prebivalcih Slovenije, I. Značilnosti in povzetek raziskave. Ljubljana, CINDI Slovenia.

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